GRN 513 GERIATRIC PHARMACY. (3)
A course designed to educate students in the basic knowledge of attitudes and skills required to meet the pharmaceutical needs of the elderly. Topics include discussions of the aging process, physiological and psychological changes in the elderly, how these changes influence patient compliance and the responses to drug and nondrug treatments, monitoring drug use in long-term care facilities, and special community services available to the elderly. Prereq: PHR 849, 852, 853, 854 and 856 or permission of instructor. (Same as PHR 813.)

GRN 585 AGING AND ENVIRONMENT. (3)
Explores the elderly person’s changing experience of environment. Physiological, psychological and social changes are related to adjustment within urban and rural community environments, special housing for the elderly, and long-term care environments. Prereq: Graduate or advanced undergraduate standing and consent of instructor. (Same as FAM/GEO 585.)

GRN 600 A STUDY OF THE OLDER PERSON. (3)
This will be a didactic/experiential course designed to give the student an overview of the effects of the aging process on the individual person. Didactic lectures will focus on the psychological, social and biological impact of aging. The experiential component will consist of having the students interact with healthy elderly individuals from Donovan Scholars Program, the Sanders-Brown subject registry, and individuals suffering from diseases related to aging.

GRN 612 BIOLOGY OF AGING. (3)
A multidisciplinary discussion of how the process of aging affects biological systems. Coverage will be quite broad and includes topics such as subcellular and cellular aging, genetics, immunology, anatomy and physiology, animal model of aging, etc. Prereq: Enrollment in a graduate program of a biomedical science department or consent of instructor. (Same as ANA/BIO/PGY 612.)

GRN 615 SEMINAR IN TEACHING MEDICAL SCIENCE (MED SCIENCE TEACHING I). (2)
A two (2) credit seminar course in which issues related to the theory and practice of life science education are discussed in a Socratic manner. May be repeated to a maximum of three credits. Prereq: Current enrollment in a life science graduate program. (Same as PGY 615.)

GRN 620 HUMAN AGING AND ADJUSTMENT. (6)
The second core course of the Gerontology Ph.D. program is designed to provide students with an holistic examination of human aging and health. Five broad focal themes, combining perspectives from the biomedical and the social and behavioral sciences, will provide the framework for this course. These themes include the historical context of aging, theories of aging, individual experience of aging, aging of societies, and aging and health. Prereq: GRN 600.

GRN 643 BIOMEDICAL ASPECTS OF AGING.

GRN 650 RESEARCH METHODS IN GERONTOLOGY. (3)
This course will provide training in research methods appropriate for the study of aging and the aged and will critically assess special considerations involved in studying this population. Topics to be covered will include: data sources for research on aging (including medical informatics and clinical epidemiology sources); the use of animal models in aging research; research designs for the study of aging [reconciling age, period, and cohort effects]: longitudinal research; measurement tools for assessing the elderly [functional assessment, ADLs, life satisfaction scales, etc.]; issues in interviewing older people; qualitative methods in aging research; the ethics of research on aging and the aged. Prereq: STA 570 or equivalent.

GRN 660 AGING AND FAMILY VALUES. (3)
The study of dynamics of family interactions and issues when some family members are elderly. Emphasis is placed on perspectives from multiple generations and across various kin categories. (Same as FAM 660.)

GRN 710 AGING OF THE NERVOUS SYSTEM. (3)
This course will examine the alterations in the brain that occur with aging and in neurodegenerative disorders such as Alzheimer’s disease. The emphasis will be on human aging although the relevance of animal models to studies of human aging will be a recurrent theme. The course will examine aging at several levels, including molecular, cellular, organismic, and behavioral. Prereq: GRN 620. A strong background in the basic sciences. (Same as ANA/PGY/PHA 710.)
### GRN 715 HEALTH POLICY AND AGING.  
(3)  
This course will present an overview of health policy in the United States as it affects the older population. It will provide an overview of the health care system, allocation of health services across the population and projected impact of the increase in the aging population on health care delivery. Various health policy proposals will be analyzed with a focus on their impact on the older population. Prereq: GRN 600 and GRN 620. (Same as HA 715.)  

### GRN 720 GERONTOLOGY/GERIATRIC DENTISTRY.  
(1)  
This course is designed to help students gain an appreciation for the significant opportunities as well as challenges the aging population will bring to their oral health practices. This course will provide students basic knowledge and information in gerontology/geriatric dentistry. Lecture, 16 hours. May be repeated to a maximum of two credits. Prereq: Admission to the College of Dentistry or discretion of course director. (Same as CDS 822.)  

### GRN 749 DISSERTATION RESEARCH.  
(0)  
Half-time to full-time work on dissertation. May be repeated to a maximum of six semesters. Prereq: Registration for two full-time semesters of 769 residence credit following the successful completion of the qualifying exams.  

### GRN 769 RESIDENCE CREDIT FOR THE DOCTOR'S DEGREE.  
(0-12)  
May be repeated indefinitely.  

### GRN 770 SPECIAL TOPICS IN GERONTOLOGY.  
(1-3)  
This course is designed to present contemporary topics in gerontology in either a lecture or seminar format. It is intended to provide students with opportunities to be informed of current issues in gerontology as well as to explore in-depth studies of particular gerontological topics. May be repeated to a maximum of twelve credits.  

### GRN 780 APPLIED RESEARCH PRACTICUM I.  
(1)  
This course is designed to provide students an opportunity to serve as an intern within a clinic, service agency or organization which provides services to older persons. The student will gain in-depth experience in the organization and an introduction to problems in applied research. The course will be taken in conjunction with GRN 790. Prereq: GRN 600, GRN 620, GRN 650.  

### GRN 781 APPLIED RESEARCH PRACTICUM II.  
(1)  
The course provides an opportunity for students to serve as an intern in a clinic, service agency or organization which provides services to older persons. Students will identify a research problem within the organization and complete a research project. The course will be taken in conjunction with GRN 791. Prereq: GRN 780.  

### GRN 782 WOMEN'S HEALTH AND AGING.  
(3)  
This class explores the issues related to health and well-being among older women. Using a multidisciplinary approach that blends humanities, social and medical science and public policy, the course examines social, economic and cultural contexts of chronic physical and mental health. Prereq: Upper level/graduate class in social science. (Same as BSC 782.)  

### GRN 785 INDEPENDENT RESEARCH IN GERONTOLOGY.  
(3)  
Independent research involving completion of a major research project resulting in a manuscript of publishable quality. Under the supervision of a Gerontology Program faculty member, this will involve review of appropriate literature, problem formulation, research design, data collection, data analysis and report writing on a topic in gerontology. Prereq: GRN 600 and GRN 620.  

### GRN 790 INTEGRATIVE RESEARCH SEMINAR I.  
(1)  
This seminar will involve students and gerontology program faculty in in-depth exploration of major health and aging-related issues. The substantive focus will be a series of specific topical problems, such as health care access, housing, long-term care, preventive health care, etc. The problem areas will be explored from a variety of disciplinary research perspectives. Prereq: Extensive research methods background.  

### GRN 791 INTEGRATIVE RESEARCH SEMINAR II.  
(1)  
This seminar is the second in a two-course sequence involving students and gerontology program faculty in in-depth exploration of major health and aging-related issues. Course details are the same for GRN 790. Prereq: GRN 790.