Demography (DEM) Courses

DEM 7013. Demographic Methods of Analysis I. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. Examines basic materials and methods used in demography, including methods for measuring levels and rates of population change, fertility, mortality, migration (both domestic and international), distribution, and composition. Emphasis on cohort and period patterns of change, methods of standardization, and life table methods. (Formerly titled "Basic Demographic Methods of Analysis.").

DEM 7023. Demographic Methods of Analysis II. (3-0) 3 Credit Hours.
Prerequisite: DEM 7013 or consent of instructor. Examines use of advanced demographic and statistical methods of analysis of population and sample data, including simulating, adjusting, and smoothing; advanced survival analysis, methods of rate decomposition and standardization, population estimation, population projections and evaluations of each. Considers applications of demographic techniques in marketing, management and impact analyses in business and government. (Formerly titled "Advanced Methods of Applied Demographic Analysis.").

DEM 7033. Mortality. (3-0) 3 Credit Hours.
Prerequisite: DEM 7113 or consent of instructor. Theoretical and demographic empirical analysis of current and historical issues concerning epidemiological/health transition, demographic and socioeconomic differentials in health and mortality, infant and child mortality, status of women and health, environment and health, demographic change and nutrition, health care systems, and health planning policies in the United States and in other developed and developing countries. Explores advanced sources of demographic data, measures, and methods of analyses used to analyze the levels and changes in these processes used in applied demographic settings.

DEM 7043. Migration. (3-0) 3 Credit Hours.
Prerequisite: DEM 7113 or consent of instructor. Examines patterns, trends and consequences of migration and immigration in the United States and other parts of the world. Explores historical and current theoretical perspectives on migration, analysis of historical, current and projected patterns of migration in the United States and other parts of the world, and examines effects of migration on other demographic, economic, social, and political factors in the United States and elsewhere.

DEM 7053. International Migration. (3-0) 3 Credit Hours.
Prerequisite: DEM 7113 or consent of instructor. Examines the determinants and consequences of international migration from theoretical and empirical perspectives. Explores impacts on the migrants themselves and the countries of origin and destination. Specific issues include global competition for skilled labor, the concept of 'replacement migration', and the role of the state in creating and regulating international population movements. Examines public policy implications of the volume and composition of migration for origin and destination countries.

DEM 7063. Applied Demography in Policy Settings. (3-0) 3 Credit Hours.
Prerequisites: DEM 7013, DEM 7023 and DEM 7113, or consent of instructor. Student must have a minimum of 30 credit hours in the Applied Demography doctoral program. Examines the roles, duties and implications of being an applied demographer in private- and public-sector policy settings, including required professional skills and knowledge. Provides practical case-study based experience in applying demographic knowledge and methods to such areas of applied analysis as marketing research, site location analysis, impact analyses, advertising analyses, program evaluation, short-term and long-term planning, and similar areas of policy development. Emphasis on interactive and team-based case-study analyses resulting in written reports, and findings presented to governmental or private-sector decision makers.

DEM 7073. Disparities in Health and Health Care. (3-0) 3 Credit Hours.
Prerequisites: DEM 7013 and DEM 7113 or consent of instructor. Overview of current and historical trends and differentials of health, health care access, and health care delivery systems among different racial/ethnic, socioeconomic, and residence area groups in the United States and elsewhere. Examines differentials in the types and rates of incidence and occurrence of alternative forms of disease and disorders, and access to physicians, hospitals and forms of treatment across demographic and socioeconomic groups. Data and methods for assessing such disparities are reviewed and alternative policy options for decreasing such disparities are discussed.

DEM 7083. Fertility. (3-0) 3 Credit Hours.
Prerequisite: DEM 7113 or consent of instructor. Theoretical and empirical overview of major issues and methodological approaches in the demographic study of human fertility in developing and developed countries. Explores advanced sources of demographic data, measures, and demographic methods of analyses used to analyze the levels and changes in these processes used in applied settings.

DEM 7093. GIS for Population Science. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. This course is designed to give graduate students interested in population science and policy fields a hands-on introduction to the use of Geographic Information Systems (GIS). The course will cover geographic data types, spatial data creation and management, exploratory spatial analysis, and basics of geospatial modeling. At the close of the course, students are expected to be able to: create and modify geographic data, perform GIS visualization of spatial data, use database software to manage geographic data and perform descriptive analysis of spatial data using industry-standard GIS software.

DEM 7113. Social Demography and Community Trends. (3-0) 3 Credit Hours.
This seminar is a survey of the major themes in demographic research. It will focus on the causes and consequences of demographic change and world population problems of growing cities, and we will explore the major theoretical perspectives focusing on the interrelationship of social and environmental causes of population change and the dynamics of human populations.

DEM 7123. Applied Demography in Education. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. Objectives for this course are focused upon development of an understanding of demographic issues in the field of education and skills in the application of demographic methods and techniques in this area. Topics will include issues of population dynamics related to school enrollment and completion and application of demographic techniques relevant for education related topics.
DEM 7143. Applied Mathematical Demography. (3-0) 3 Credit Hours.
Prerequisites: DEM 7013 and DEM 7273. This course will examine the 
mathematical background behind the major methods and models used 
in demographic research and show how they are applied in population 
analysis. Students are assumed to have had the basic demographic 
techniques class, and a firm grasp of basic algebra. Calculus and matrix 
algebra will be used throughout the course, but extensive exposure to 
each is not assumed.

DEM 7153. Applied Demography in Public Health. (3-0) 3 Credit 
Hours.
Prerequisite: Consent of instructor. Course work and readings will provide 
overview of demographic methods applied to examination of issues in 
the area of public health. A range of public health and epidemiologic 
topics will be reviewed in relation to issues related to demography 
and demographic methods. Assignments will provide students with 
opportunities to examine key issues in public health and explore specific 
topics of public health relevance.

DEM 7173. Applied Demography in Urban and Regional Planning. 
(3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. Urban and regional planning is 
strongly dependent on information generated from applied demography. 
This course will review the field of urban and regional planning with 
particular reference to the use of demographic information. Elements of 
the course will emphasize learning and applying traditional and innovative 
approaches to estimating and projecting population for small areas with 
particular reference to issues of geography and land use patterns.

DEM 7183. Social and Economic Impact Assessment. (3-0) 3 Credit 
Hours.
Prerequisite: Consent of instructor. The purpose of this course is to 
provide students with an understanding of the requirements of, 
methodologies for, and issues in, socioeconomic impact assessment 
and to provide practical, working experience with socioeconomic impact 
assessment techniques.

DEM 7223. Advanced Methods for Life Table Analysis. (3-0) 3 Credit 
Hours.
Prerequisites: DEM 7013, DEM 7023, and DEM 7273 or consent of 
instructor. This course covers demographic life tables and event history 
analysis for events such as unemployment spans, birth intervals, years of 
healthy life lived, and other codependent demographic events. Further, 
this course will provide a survey of demographic analytical methods for 
empirically explaining variation in timing of demographic events. This 
course will use SAS and/or STATA software.

DEM 7243. General Research Methods for Demographers. (3-0) 3 
Credit Hours.
Prerequisites: DEM 7013 and DEM 7113 or consent of instructor. 
Examines key aspects of research methodology and provides an 
understanding and overview of practical and theoretical methods used 
to include sampling, interviewing, questionnaire and survey construction, 
and methods of analysis. The course will examine alternative research 
perspectives used in writing major publishable articles, and a dissertation 
in demography.

DEM 7253. Survey Methods for Demographers. (3-0) 3 Credit Hours.
Prerequisite: DEM 7243 or consent of instructor. This course examines 
the use of survey methodology and the research process, with special 
attention given to survey instruments as they relate to demographic 
research. Topics to be covered include a general overview of large 
demographic surveys, modes of data collection, questionnaire 
design, reliability and validity, sampling, and analysis incorporating 
survey designs for various large-scale demographic surveys. Special 
attention will be given to data collected by the U.S. Bureau of the 
Census. Statistical software applications will be used as they relate to 
demographic survey instruments. (Formerly titled “General Research 
Methods for Demographers II.”).

DEM 7263. Spatial Demography. (3-0) 3 Credit Hours.
Prerequisite: DEM 7093 or consent of instructor. This course will give an 
in-depth coverage of spatial demographic processes including models 
of migration, multiregional population growth, and spatial dependence 
in vital rates. The course will include a brief introduction to Geographic 
Information Systems, availability of spatial data and construction of geo-
databases for population studies. The course will have a large analytical 
component with topics to include global and local spatial autocorrelation, 
analysis of spatial point patterns, neighborhood statistics and spatial 
regression analysis. Emphasis is placed on usage of computer software 
for the analysis of population data.

DEM 7273. Statistics for Demographic Data I. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. This course covers two main areas 
of statistical analysis. First, techniques for the description of univariate 
and bivariate distributions are covered, including summary statistics, 
confidence intervals, correlations, graphical exploratory methods 
and hypothesis testing for two and more groups. Also covered is the 
analysis of categorical data, including analysis of contingency tables 
and measures of association for categorical data. Secondly, ordinary 
least squares regression analysis and analysis of variance procedures 
and their diagnostics are covered. All methods are complemented by 
the application to demographic survey data sets and instruction in the 
Linux environment using both the SAS and R statistical programming 
languages. (Formerly titled “Univariate and Categorical Statistical 
Analysis for Demographic Data.”).

DEM 7283. Statistics for Demographic Data II. (3-0) 3 Credit Hours.
Prerequisite: DEM 7273 or consent of instructor. This course represents 
an in-depth coverage of the general linear model framework, including 
multivariable regression analysis, logistic and Poisson regression 
and multilevel modeling. Model fit, model comparison and regression 
diagnostics for each method are covered. In addition to these topics, 
students are introduced to techniques for dealing with missing data 
including multiple imputation. All methods are complemented by 
the application to demographic survey data sets and instruction in the 
Linux environment using both the SAS and R/S-plus statistical 
programming languages. (Formerly titled “Multivariate Statistical Analysis 
for Demographic Data.”).
DEM 7413. Demographic Perspectives on Poverty. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. This seminar provides an overview of poverty in the United States from a comparative perspective. It addresses the determinants of poverty, with special attention given to different demographic groups, such as single women with children, race and ethnic minorities, and urban and rural residence. Among the topics to be discussed include the differences between the European and U.S. approach to measuring poverty; the relationship between welfare policies, population growth, and economic development; race and welfare; and the 1996 welfare reform in the United States and its consequences to date. Much emphasis will be given to poverty-abatement strategies.

DEM 7423. Demography of the Labor Force and Labor Markets. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. This course introduces students to the study of demographics characteristics of the labor force and of labor markets. It addresses such major social and economic trends as the increased labor force participation of women, the integration of formerly disenfranchised groups into white-collar occupations, and the emergence of a service society. Literature that can help explain these trends will come from gender studies, race and ethnicity, and post-industrialization, in addition to demographic research. Other topics to be discussed cover the study of occupational upgrading; employment, unemployment, and underemployment; regional shifts in employment; the work family relationship; and the role of social policy regarding work, family, and fertility.

DEM 7433. Demography of Race and Ethnicity. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. This course is designed to introduce students to the study of the demography of racial and ethnic groups in the United States with some attention to other parts of the world. Using theoretical perspectives drawn from the demographic and race and ethnic literatures, the course will examine demographic, social, and economic variations among major racial and ethnic groups. The course is divided into a series of broad topics covering the study of the demography of racial and ethnic groups including an overview of the construction of race and ethnicity; theoretical perspectives; the foundations of inequality; data and methodological issues; the three population processes (fertility, mortality, and migration); intermarriage and multiracial and pan-ethnic identities; marriage, family, and household arrangements; and labor market and socioeconomic outcomes.

DEM 7443. Demography of Adolescence and the Transition to Adulthood. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. Demographers have long considered adolescence and early adulthood as a critical period when significant life choices are made. Important milestones overlap during these years as young people leave school, begin work, form romantic relationships, become independent from parents and begin forming their own families. This seminar explores the different factors that define the timing and progression of this transition and explores demographic and policy implications across different social and cultural contexts. It also highlights the relevance of the life course for the understanding of demographic processes.

DEM 7701. Professional Development Colloquium. (1-0) 1 Credit Hour.
Prerequisite: Consent of instructor. This is a professional development course focusing on the field of applied demography. Topics will vary by semester, and may include such things as grant writing, proposal preparation, peer-reviewed journal publication procedures, presentation development, demographic data sources and literature, grant funding sources, and job hunting. Other professional development topics will be addressed. May be repeated for credit when topics vary.

DEM 7783. Internship in Applied Demography. (0-0) 3 Credit Hours.
Prerequisites: Consent of faculty advisor for internships and the Graduate Advisor of Record. Student must have a minimum of 40 semester credit hours in the Applied Demography doctoral program. Practical experience in a workplace setting approved by the faculty advisor for internships and the GAR in which classroom knowledge of demographic research, methods, processes, and implications are applied. No more than 3 hours will apply to the Doctoral degree. A research paper under the supervision of assigned faculty is required at the end of the internship.

DEM 7801. Directed Research. (0-0) 1 Credit Hour.
Prerequisites: Consent of instructor and a minimum of 40 semester credit hours in the Applied Demography doctoral program. Directed individual reading, discussion, writing, and/or studies of selected topics in the field of demography. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours will apply to the Doctoral degree.

DEM 7803. Directed Research. (0-0) 3 Credit Hours.
Prerequisites: Consent of instructor and a minimum of 40 semester credit hours in the Applied Demography doctoral program. Directed individual reading, discussion, writing, and/or studies of selected topics in the field of demography. For students needing specialized work not normally or not often available as part of the regular course offerings. May be repeated for credit, but not more than 6 hours will apply to the Doctoral degree.

DEM 7901. Special Topics. (1-0) 1 Credit Hour.
Prerequisite: Consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. May be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to the Doctoral degree in Applied Demography.

DEM 7902. Special Topics. (2-0) 2 Credit Hours.
Prerequisite: Consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. May be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to the Doctoral degree in Applied Demography.

DEM 7903. Special Topics. (3-0) 3 Credit Hours.
Prerequisite: Consent of instructor. An organized course offering the opportunity for specialized study not normally or not often available as part of the regular course offerings. May be repeated for credit when topics vary, but not more than 6 hours, regardless of discipline, will apply to the Doctoral degree in Applied Demography.

DEM 7911. Doctoral Dissertation. (0-0) 1 Credit Hour.
Prerequisite: Admission to Candidacy for the Doctoral degree in Applied Demography. May be repeated for credit, but not more than 12 hours may be applied to the Doctoral degree.
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DEM 7913. Doctoral Dissertation. (0-0) 3 Credit Hours.
Prerequisite: Admission to Candidacy for the Doctoral degree in Applied Demography. May be repeated for credit, but not more than 12 hours may be applied to the Doctoral degree.

DEM 7916. Doctoral Dissertation. (0-0) 6 Credit Hours.
Prerequisite: Admission to Candidacy for the Doctoral degree in Applied Demography. May be repeated for credit, but not more than 12 hours may be applied to the Doctoral degree.