2016-2017

MA PROGRAM

International Graduate Program of Asian Demographic Research

School of Sociology and Political Science
Shanghai University

CONTENTS

1. OBJECTIVES OF THE PROGRAM

International Graduate Program of Asian Demographic Research is an English-taught post-graduate program under the Asian Demographic Research Institute (ADRI), specially designed for international and Chinese students who are interested in demography and scientific studies of population related issues, particularly in Asia. As a component of the multi-disciplinary Post-graduate Program of Global Studies (PPGS) at Shanghai University, this program reflects the ADRI's mission of training new generation of demographers for in-depth comparative analysis in Asia that makes up more than half of the world population.

Students will gain a solid foundation on theories and methods for understanding the determinants and consequences of population dynamics, modern techniques for collecting and processing population data, and statistical and mathematical models and tools for analyzing and simulating population-socioeconomic-environment interactions. Instructions are provided by ADRI's faculty members as leading international experts in the fields of study who graduated and taught in world-class universities of the US, Europe, and Australia. Students will also benefits greatly from being exposed to guest lectures given by the world's most famous demographers. Through the network of Asian MetaCentre for Population and Sustainable Development Analysis, of which ADRI serves as the headquarter, students will have chances of participating in demographic training workshops and other exchange programs with member institutes of the Asian MetaCentre.

Upon completion of the program, the graduate students will have gained a solid knowledge base for scientific study of demography, developed an extensive network of contacts with established scholars, and been prepared for a career in Asian population researches, and policy and business analysis.

2. DEGREE REQUIREMENTS

1) Credits: 40 Credits in total

At least 40 credits are needed to get a degree, among which 23 credits are from the compulsory courses, 14 are from the optional courses and 3 are from academic seminars.

2) Degree Requirements

- **Publication**

At least one academic paper must be published (in English, Chinese, or mother language)

during the period of study before the Degree is awarded.

- **Language of the Thesis**

The master's thesis must be prepared in English with an extra Chinese abstract of about 1500 characters.

- **Thesis Defense**

After the successful oral defense and evaluation by the Academic Degrees Committee of the Shanghai University, the graduation certificate and a diploma of master degree of People's Republic of China will be issued.

3. DURATION

The required time for the MA students of this program is 2.5-3 years, and the maximum time is five years.

4. COURSE STRUCTURE

All the courses are taught in English.

- **Compulsory Courses (23 credits)**
  1. Demographic Computation (4 credits)
  2. Statistical Models for Population Studies (4 credits)
  3. Migration and Urbanization (3 credits)
  4. Population, Health and Health Policy (3 credits)
  5. Population, Environment and Climate Change (3 credits)
  6. The Frontier of Demographic Research (3 credits)
  7. Family, Marriage and Gender (3 credits)

- **Optional Courses (14 credits)**
  1. Introduction to Population Studies (3 credits)
  2. Spatial Analysis for Population Studies(3 credits)
  3. Demographic Analysis with Application to Aging Societies (3 credits)
  4. Population Economics (4 credits)
  5. Theories of Global Studies (4 credits)
  6. Modern History of China (3 credits)
  7. China and Globalization (3 credits)
  8. Chinese Language (3 credits)
  9. Introduction to Quantitative Methods (4 credits)

10. Multivariate Data Analysis (4 credits)

- **Academic Seminars (3 credits)**

During the graduate studies, students are expected to attend at least 10 open lectures or seminars on the campus concerning economics, sociology, and sciences and technologies, in order to expand knowledge scope and strengthen capacity of conducting academic research.

5. ADMISSION PROCESS

1) Admission Requirements

- English proficiency: TOFEL 80 or IELTS 5.5
- Aged 18 to 40

2) Documents for Application

- Application Entry (http://www.apply.shu.edu.cn)
- Bachelor Degree certificate and diploma and grade reports
- English proficiency certificates
- 2 recommendation letters
- Study or research plan
- Passport and its photocopy
- RMB 500 Yuan or USD 80 dollars of application fee

3) Deadline for Application:

Before the end of June each year

6. SCHOLARSHIPS AND TUITION

1) Scholarships

There are some scholarships available for excellent international students who are going to pursue an MA degree at Shanghai University. For detailed information, please visit http://www.apply.shu.edu.cn/sys/web/Scholarships.asp.

2) Tuition

RMB 32, 500 per year (paid yearly and no installments). Payment methods can be found at http://www.apply.shu.edu.cn/sys/web/Admissions.asp?id=5

7. TERMINATION OF GRADUATE STUDY

A student who fails to meet the above requirements may be advised for termination of graduate study. The termination procedure complies with the University Policies.

8. UNVERSITY CALENDAR

1) Quarters (Three 10-week long quarters and one 4-week summer quarter)

1st quarter, September to November

2nd quarter, December to January

3rd quarter, March to June

4th quarter, June-July

2) Vacations & Holidays:

Winter vacation, January to February for 1 month at most (including Spring Festival, varied according to Chinese Lunar calendar)

Summer vacation, July to August for 2 months at most

National Day, October 1st to 7th

May Day, May 1

New Year Holiday, January 1

Qingming Festival, April 5

Duanwu Festival, 1 day in Mid June

Mid Autumn Festival, 1 day in Mid September

CURRICULUM

Course Type	Course Name	Academic Hours	Credits	Term
Compulsory Courses	Demographic Computation	40	4	1
	Statistical Models for Population Studies	40	4	2
	Migration and Urbanization	30	3	1
	Population, Health and Health Policy	30	3	3
	Population, Environment and Climate Change	30	3	3
	The Frontier of Demographic Research	30	3	2
	Family, Marriage and Gender	30	3	2
Optional Courses	Introduction to Population Studies	30	3	1
	Spatial Analysis for Population Studies	30	3	2
	Asia Study	40	4	1
	Demographic Analysis with Application to Aging Society	30	3	3
	Population Economics	40	4	2
	Modern History of China	30	3	1
	China and Globalization	30	3	3
	Chinese Language	30	3	3
	Theories of Global Studies	40	4	1
	Introduction to Quantitative Methods	40	4	1

	Multivariate Data Analysis	40	4	3
Academic Seminars			3	1-6
Master's Thesis				3-9

COURSE DESCRIPTIONS

I. COMPULSORY COURSES

1. Demographic Computation

This course aims to introduce the concept of demography and its methods and techniques and to study population issues in the contemporary world by analyzing the past evolution and exploring scenarios for the future. In this hands-on programming course, participants will learn how to use basic and advanced spreadsheet techniques (in Excel and VBA) to present and analyze demographic data. Each topic is aimed to show how to apply conventional and advanced Excel techniques to solve typical tasks of demographic analysis. More specifically, students will embark on a journey to understand the evolution of population in a country of their choosing. We will then define future scenarios and project population into the future along the basic dimensions of age and sex. Once the model is ready, we will explore the policy implications of different assumptions.

There will be a frequent back and forth between the instructor explaining a new concept or method followed by the students implementing this method on their computers. Students will be provided with input data, but will also have to search for their own data on the internet and download it for their calculations. In addition to the regular active participation in class and in group discussions, students will have to deliver reports in which they demonstrate how they could apply the new methods to new data.

After completion of this course, students will be able to

- apply different demographic techniques using Excel and Visual Basic
- calculate and interpret life tables
- perform demographic projections applying cohort-component methodology
- learn how to work with and transform large demographic data sets

Instructor: Prof. Samir KC (Nepalese, PhD from the Groningen, currently IIASA) leads ADRI's research pillar

on human capital and development analysis. His research interests focus on developing and applying multi-state population models in demographic analysis and projections with a particular focus on modeling human capital formation in education and health; and differential vulnerability to natural disasters. Currently, he is working on developing methods of population projections at sub-national levels. He has published in Science magazine (2011) and other peer-reviewed journals.

2. Statistical Models for Population Studies

This course deals with statistical models for the analysis of quantitative data typically found in population studies. These include standard linear regression models for the study of continuous responses (including multiple regressions), binomial regression models for binary data (including logistic regression and probit models), models for counting data (including Poisson regression and negative binomial models) and models for survival data. These techniques are each part of the Generalized Linear Model (GLM) family, which provides a central unifying statistical framework for the entire course.

The course is taught at an intermediate statistical level. The emphasis is on understanding and applying statistical concepts and techniques, rather than proving theorems. However, the course assumes students are familiar with basic concepts in probability theory, statistical estimation and testing theory, and statistical methodology up to multiple regression analysis. Some familiarity with matrix algebra and calculus is necessary. Computer literacy is essential. The course has a strong statistical computing element to it, where students will learn in R how to efficiently load and manipulate data sets, and implement their modelling strategies.

Course requirements consist of required readings, regular problem sets and a final exam. Most of the course material is covered in the formal lectures and workshops. A set of lecture notes is distributed, and these can be supplemented with optional readings. The problem sets deal mostly with analysis of small datasets using R. Final grades are calculated as a weighted average of the grades received during the term (60%) and the final exam (40%).

Instructor: Prof. Guy Abel (English, PhD from Southampton, previously Vienna Institute of Demography) is the leader of ADRI's research pillar on international migration. His research interests cover estimating migration and applying statistical methods to better forecast components of population change. He recently published an article in Science Magazine that uses indirect estimates methods to quantify global bilateral migration flows between all countries for the first time.

3. Migration and Urbanization

This course examines migration and urbanization as components of demographic and socioeconomic change in the process of development. The course begins by covering some definitional, measurement, and data issues and reviewing main concepts and theories in migration and urbanization studies. We will examine global trends in migration and urbanization, patterns of migration and urbanization in selected developed and developing countries, and characteristics of internal and international migrants. We will explore causes of migration and urbanization and their demographic, economic, social and environmental consequences. Key issues in the course include the growth of mega-cities, the blurring of the urban-rural distinction, the emergence and development of *in situ* urbanization and extended metropolitan regions, and the evolution of mobility patterns in the process of development, including rural-urban, urban-urban, urban-rural and circular migration. We will also discuss the implications of the above issues for understanding migration and urbanization processes and related policy making and planning.

Instructor: Prof. Yu Zhu (Chinese, PhD Australia National University) is the lead ADRI's Research pillar on internal migration and urbanization. His research focuses on issues relating to migration and urbanization. He served as Chair of the IUSSP Scientific Panel on the Impact of Internal Migration and Urbanization in Developing Countries; and is currently Member of the International Advisory Board of UN Habitat's World Cities Report and Chair of Asia and Pacific Migration Research Network. He is also Member of the Editorial Board of International Migration Review and Asian and Pacific Migration Journal.

Dr. Chen Chen (Chinese, PhD University of California at Los Angeles) is post-doc fellow at ADRI. Her research interest covers comparative studies of migration transition paths in Asian context and rural-urban migration and circularity in China.

4. Population, Health and Health Policy

The dynamics of population processes are one of the most fundamentally important aspects of population health condition and health policy operation. This course aims to introduce students to major demographic concepts (e.g. mortality, fertility, and migration), to increase students' understanding of the interface of health, healthcare and population dynamics, and to help students to cope with health issues that are affected by population changes.

The course discusses population size, distribution, concentration and compositional traits, and their implication for health, healthcare, and policy. The course addresses the dynamic processes of fertility, mortality, and mortality and examine how the interaction of these processes is related to population health status, health behavior and health policy. The course also introduces to demographic and health data, and illustrates how these data to be applied on the study of health, healthcare, and health policy.

Upon successful completion of the course, students should be able to:

1) Describe the relationship among health, healthcare and demography
2) Define and measure population size, distribution, concentration and their trends, and the implications of these demographic attributes for health, healthcare and policies
3) Understand the different ways to display and analyze compositional variables (e.g. age, sex, education), and their implications for health, healthcare and policies
4) Have a good knowledge of the concepts and measures behind the three most important elements of demography: mortality, fertility and migration
5) Select and analyze demographic and health data and other materials on relevant topics related to demographic dynamics and health issues, and present them in a coherent and convincing fashion in policy discussion in the form of constructive essays or effective presentations.

Instructor: Prof. Zhao Jiaying (Chinese, PhD Australia National University) is research fellow at Australia National University, Senior Surveillance Officer of Center for Epidemiology and Evidence in Sydney, and Adjunct Associate Professor at ADRI. Her research focuses on changes in the patterns and causes of mortality and morbidity by demographic characteristics (gender and age), and their impacts on population dynamics and health policies in Asia. Her works published top scientific journals of the field including the Bulletin of World Health Organization, Population Health Metrics, and Journal of Epidemiology.

5. Population, Environment and Climate Change

This course provides a comprehensive examination of interrelations between population, environment and climate change with a particular emphasis on Asia. It will help student understand the impacts of population growth and compositional changes on the environment, as well as the consequences of environmental changes affecting human society. While the conceptual framework used here retains a demographic focus, the course materials will reflect the topic's interdisciplinary nature.

In the first part of the course, we will review the main theories of schools on population, development and the environment, as a foundation for critical consideration of human-induced environment degradation and its feedback on human population, the public debates on environmental justice, and sustainable development movements. During the latter part of the course, students will learn the basics of major qualitative and

quantitative methods and tools used in the analysis of population and environment interactions.

The course will use examples of various aspects of environmental changes such as land use and land cover, water, air, energy and climate systems, under different processes and components of human population dynamics i.e. fertility, mortality and morbidity, migration, and urbanization. Participants in this course will be familiar with global and regional emerging issues, concerning the scale, uncertainty, efforts and conflicts of environment governance.

Instructor: Prof. Leiwen Jiang (Chinese, PhD University of Amsterdam, previously Brown Univ., IIASA and Peking University, currently with NCAR) is founding director of ADRI and also leads the pillar on population and environment/climate studies. His research has involved methodological work on improving demographic components of integrated climate assessment models and exploring the environmental implications of demographic dynamics. He served as panel member of International Union for Scientific Studies of Population (IUSSP) Scientific Panel on Climate Change, lead author of Intergovernmental Panel on Climate Change (IPCC) Assessment Report, and coordinator of IPCC Scholarship Program Working Group III.

6. The Frontier of Demographic Research

This course will invite the world's famous demographers and prominent population research scholars to introduce the most important advancement in demographic research theories and methods, and discuss emerging population related issues particularly in Asia. The topics include human capital development, population aging, international migration, household consumption and energy use, climate mitigation and adaptation, and big data and population process.

Students will benefits greatly from being exposed to guest lecturers of multiple disciplines and across the global regions. Through the seminars, participants will anticipate to develop an extensive network of contacts with established scholars in Asian population research throughout Asia and the world.

Coordinator: Prof. Leiwen Jiang

7. Family, Marriage and Gender

This course introduces significant research in family sociology and social demography. We understand families as situated in various historical and cultural

contexts adapting to different socioeconomic and cultural configurations in different societies. A focus will be on the comparison between East Asia and Western societies. Following a life course perspective, we will cover the following topics, gender socialization, unionship/marriage decision, intimate relationship, divorce and remarriage, intergenerational relations, and aging. In addition, we will spend a significant amount of time on two highly debated issues in family demography. First topic is whether Asian societies are entering or will enter the Second Demographic Transition. We will review lowest low fertility in the world: East Asia and Mediterranean countries. We will discuss the underlying causes of these low fertility societies and various family policies in different countries. Second, we will discuss whether marriage as a social institution is experiencing fundamental changes in East Asia in reference to “deinstitutionalization of marriage” in the Unites States. We will cover continuities and changes in East Asian families and how they function and cope faced with rapid industrialization and globalization. We will also extensively discuss the so-called "leftover" women phenomenon in China to explore the underlying cultural and institutional dynamics.

Instructor: Prof. Yingchun Ji (Chinese, PhD University of North Carolina-Chapel Hill) is Eastern Scholar Professor at Shanghai University. Her interests include family sociology, social demography, gender, health studies, quantitative and mixed methods. She has published in journals of multiple disciplines, including sociology, family studies, population studies, and health studies. Much of her research is dedicated to family and gender issues in the Asian institutional and cultural context. She served as guest editor of Journal of Marriage and Family. Her current research projects include research on “leftover” women and “surplus” men in China, and social relations and health outcomes among cancer survivors.

II. OPTIONAL COURSES

1. Introduction to Population Studies

This course intends to introduce the student to population studies covering the basics on population concepts, theories, nature and sources of population data, population

growth, structure and distribution. It will also touch upon the related research fields, including population economics, population geography, population and society, population and the environment. Particular attention will be paid the status of population dynamics in Asia.

Coordinator: Prof. Samir KC

2. Spatial Analysis for Population Studies

This course aims to introduce students to the applications and usage of spatial statistics for population research, and promotes the use of spatial methods and spatial thinking for the analysis of population issues. This class will have a large analytical component with topics to include global and local spatial autocorrelation, neighborhood statistics, analysis of spatial point patterns, spatially autoregressive models and geographically weighted regression. Students will learn several software packages, including ArcGIS, R, GeoDa, to tackle various applications. Participants will learn practical techniques associated with the analysis and visualization of demographic data ranging from how to communicate with maps and create maps for use in academic, government, and applied demographic settings and new directions and challenges associated with spatial technologies.

Instructor: Prof. Deborah Balk (American, PhD Stanford) and Dr. Bryan Jones (American, PhD Colorado University at Boulder)

3. Demographic Analysis with Application to Aging Societies

This intensive course is based on training workshop of Asian MetaCentre for Population and Sustainable Development Analysis, usually run at College for Population Studies at Chulalongkorn University. It aims to train and brush up on demographic and population related methods with an emphasis on aging society planning and population projection. These methods can be applied to solve typical tasks of demographic analysis utilizing basic and advanced spreadsheet techniques.

Instructor: Prof. Sergei Scherbov (Russian) is director of demographic analysis at Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID, WU) in Vienna. He is one the world's leading experts in demographic computer applications.