GGS 304/590 Population Geography-Spatial Demography
Summer Session DL1, July 6 – Aug 8, 2020
Online live sessions: Mondays and some Wednesdays 4:30 – 5:45 pm
Instructor: David Wong, Professor
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Virtual Office: https://gmu.webex.com/meet/dwong2

Course Description:

All issues and problems on the Earth, environmental and societal, are directly or indirectly related to human population. In fact, changes in population size and human behavior are major drivers of physical, environment and societal changes. In reverse, environmental and societal conditions affect population dynamics – aspatial and spatial. A thorough understanding of population characteristics and dynamics serves as the foundation of analyzing not only population issues, but almost all societal problems, including global change issues. Besides reviewing basic demographic concepts, this course also enumerates the spatial dimensions of population and its relationships to natural resources, environment and various societal aspects.

GGS 304, meeting the **Mason Core's synthesis requirements**, draws on knowledge from several core areas: **social science** (involving economics, geography, and demography); **natural science** (relations to the natural environment); **global understanding** (providing a background of the world's condition). The course also involves **quantitative reasoning**, and the use of Geographic Information System (GIS), an **Information Technology** tool.

GGS 590 is the summer version of GGS 704 (Spatial Demography). Students enrolling the ESGS PhD program can use this session of 590 to meet one of the core program requirements (additional paper work will be needed).

What to Expect?

Contents: Students will learn concepts, models and theories related to demographic characteristics, population growth, spatial dynamics and distributions. Students will also learn about various demographic measures and methods to analyze population issues. Students will learn using maps as analytical tools. Some of these tools and methods will be implemented in software programs, including spreadsheets and GIS/mapping packages. Students will acquire skills to use relevant tools to analyze population and societal issues with appropriate data.

Technology Expectations: You are expected to know basic spreadsheet commands (MS Excel, Google Sheets, or any compatible spreadsheet program). *Students with no prior experience in MS Excel are expected to gain basic understanding from watching training video(s). Please refer to Blackboard (Bb) under Technology Requirements.* Those with no prior experience in GIS would benefit from some training videos-tutorials. This course will use *ArcGIS Online*. You are encouraged to watch the relevant videos (see the *Technology Requirements* section in *Bb*). Instruction to access *ArcGIS Online* can be found on *Bb* under *Resources*.

Outcomes: After finishing this course, students are expected to have a better appreciation of global and local population issues, and a good comprehension of fundamental **population-demographic concepts, theories, models, methods** and **techniques**, both spatial and aspatial. Specifically, students should be able to find demographic data, determine their appropriateness, select suitable methods and tools to analyze these data, and interpret the results or other

demographic measures to answer pertinent questions. Students should be able to discern claims or arguments about population issues either based on their current knowledge or by conducting additional research. Therefore, students will be evaluated by how well they ***comprehend*** these bodies of knowledge in terms of their ***definitions***, ***apply*** the knowledge gained from this course to answer societal questions, and ***interpret*** data and results of analysis. **GGS 590**: Students should be able to ***evaluate*** and ***critique*** population studies.

Prerequisites (GGS 304): 30 hours, completion of, or concurrent enrollment in, all university general education courses, or permission of instructor.

Format/Logistics:

- The course follows the regular summer Session C 5-week schedule, assuming that the class meets four times each week, 1 hour and 15 minutes (105 mins) each day (if in-person classes were held). In the online mode, learning activities are scheduled for four days in each week.
- Detailed schedule for specific learning activities are posted on Bb.
- Lecture notes and videos are posted on Bb. Students should review them according to the class schedule.
- For selected topics, one or more questions will be posted on the Discussion Board on Bb. Students' responses are counted as ***Participation***. (60 points)
- Twice a week, the most, in the prescribed times will have live online sessions using Blackboard Collaborate Ultra. The live sessions will:
  - address logistical and course-content questions
  - review, comment, clarify lecture material
  - summarize or comment the discussions on Bb Discussion Board

  Attending these live sessions are not required, but are strongly encouraged. Tips of exams will be offered.

Texts:

Required Text: Thomas, R. K. (2018) *Concepts, Methods and Practical Applications in Applied Demography*. Springer. (ebook is fine)
https://link.springer.com/content/pdf/10.1007%2F978-3-319-65439-3.pdf

Supplemental Text: Newbold, B. (2017) *Population Geography: Tools and Issues*. Rowman & Littlefield Publishers;

Assessment Methods: (details below)

6 exercises	60 (not equally weighted) - 304 and 590 have different versions
Mid-term	15 (July 20, Monday, ,4:30 – 5:45pm)
Final	25 (August 7, Friday, 4:30 – 5:45pm)
Participation	60
GGS 304 Communication	
Report (25)	
Presentation (15)	40 in total (due on August 3)
GGS 590 Research	
Review	40 (due on August 3)
Total:	200 points

- The grades are "curved".
- For GGS 304, the "average grade" will be a C+ or B-.
- For GGS 590, the "average grade" will be A-/B+.
- The best students will receive an A, regardless of how high or low his/her total scores may be. Students may fail if their total scores are "significantly" lower than the rest of the class.
- 10% of the score for each day will be deducted if an assignment is late. Unless otherwise stated, all assignments are due by the end of the day in which they are due.
- All materials submitted to meet the evaluation criteria should be completed in accordance with the student Honor Code (University Catalog). Also, no "double dipping" of term paper/report is allowed unless permissions are given by involved instructors.

Incomplete will be handled strictly according to the University policy. Make-up tests are not given unless under unusual circumstances such as serious illness. Proof (documentation) is necessary to be eligible for make-up test/exam.

Major Topics and Course Schedule:

Module 1: Covering the Basics (July 6-10)

1. Introduction (Ch. 1) (July 6 – 7)
   Population Geography/Spatial Demography: What & Why?
2. Perspectives and Methods (Ch. 2) (July 8)
3. Data and Tools (Ch. 3) (July 9)

Module 2: Fundamental Demographic Concepts (July 13-17)

4. Population Size, Distribution and Concentration (Ch. 4) (July 13 – 14)
5. Population Composition and Characteristics (Ch. 5) (July 15 - 16)
   Compositions
   Analysis

**** Mid-term July 20 (4:30 – 5:45 pm): covers material up to Module 2, Topic 5.**

Module 3: Demographic Processes (July 20- 30)

6. Demographic Processes: Fertility (Ch. 6) (July 20-21)
7. Demographic Processes: Mortality (Ch. 7) (July 22-23)

**** July 24 - Submit the first page of your report (304) – review (590) for comments**

8. Population Spatial Dynamics: Migration (Ch. 8) (July 27-28)
9. Population Temporal Dynamics: history, change, and measurement (Ch. 9) (July 29-30)

Module 4: Selected Applications of Demographic Analysis (Aug 3-6)

**** Class Presentations GGS 304 (Aug 3-4)**

10. Health Demographics (Ch. 11) (Aug 5-6)

**** Final Exam: Aug 7: focuses on material in Module 3, Topic 6 and onward.**

Assessments

Exercises (60 points)**:**
Six exercises will be given out after associated with the lectures. Specific instructions will be provided. All exercises should be submitted through Bb, and typed with 1-inch margin on all sides, 12-point font in Times New Roman, with page numbers and double-spaced.

GGS 304 Report:
To partially meet the synthesis requirements, students are required to submit a report. **Describe and explain the population characteristics of a chosen country – this is the focus of the report**. Each student should use the Wikis tool in Bb (under *Enter your selected country*) to announce to the class the country you have chosen to research and write about. Countries taken cannot be used by another student ("first-come, first- serve"). However, prior to the sign up, students should conduct preliminary research, exploring if sufficient data and information for the particular country is available. The report should include the minimum the following sections:

- Geographical and political settings of the chosen country (**how may these factors affect population distribution and characteristics?**)
- Who are the people? Demographic characteristics.
- Where are the people? Their spatial distributions.
- Relevant and significant historical development related to the population, if any..
- Major population issues in the country (all issues are related to population, but some are more population-oriented and more important than others).

- The length of the report should be 2800 to 3000 words (please provide a word count, approximately 10 to 13 pages), plus references, tables and figures/maps.
- Select your country by July 8.
- Main objectives: demonstrate your comprehension of and apply concepts, theories and methods you learn in the course.

GGS 590: A summary-review and critique of three articles published in peer-reviewed journals, critically evaluating how demographic/population data are analyzed ***spatially or geographically*** in some of the following contexts:

a. Business planning, b. Health service,
c. Epidemiological analysis, d. Crime and public safety planning,
e. Education, f. Urban &/or community/economic planning,
g. Transportation, h. possibly others

For each paper, your review should include the following sections, at the minimum:

- What is/are the objective(s) of the study? (Research questions, hypotheses)
- Data used and methodology of the study
- Result and conclusion
- Critique:
    - Is/are the research question(s) important or meaningful? Why?
    - Are the data and analysis appropriate?
    - Are the results and conclusion supported by the analysis?
    - How may the study be improved?

- The length of the paper should be no more than 3500 words (please provide a word count), plus references, tables and figures/maps.
- A list of potential journals is provided on Bb.
- Objectives: 1) apply concepts, theories and methods you learn in the class; 2) build your capabilities in critically evaluating research (in this case, population-oriented research).

For both the country report and review:

- References: use a format adopted by a major academic journal (*Annals of the AAG; The Professional Geographer*, etc.) consistently throughout the report/paper
- Sources of information, including statistics, should be provided (as citations, references or footnotes). ***Plagiarism*** means claiming the credits that you do not deserve.
- The length of the report and paper should be 2800 to 3000 words (please provide a word count, approximately 10 to 13 pages), plus references, tables and figures/maps. It should be in double-spaced, single-sized, 12 point in Times New Roman or a similar font. Detail of the submission process will be provided later. The report/paper is due on August 3. Earlier submissions will be appreciated.
- ***July 14***: you are required to submit the first page of your report/review for comment. Although this one-page will not be graded, you will regret if you do not submit it.
- Rubrics for both the report and review are posted in Bb. They will be used for grading.

GGS 304 Presentation:

Student would record a video of a concise presentation of approximately 8 minutes to summarize the report to meet the verbal communication requirement of a synthesis course. The presentation should be well structured and organized, highlighting major findings of your research. In the presentation, unique population characteristics or issues of the chosen country may be highlighted. Rubrics for presentation and technology supporting the video recording are posted on Bb. Students should update the video to Bb by 9am of August 4.

Other Policies:

GMU Email Accounts: Students must use their GMU email account to receive important University information, including messages related to this class. See http://masonlive.gmu.edu for more information.

Office of Disability Services: If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services (ODS) at 993-2474, http://ods.gmu.edu. All academic accommodations must be arranged through the ODS.

GMU Resources:

The Writing Center: http://writingcenter.gmu.edu
University Libraries, Ask a Librarian: http://library.gmu.edu/ask
Counseling and Psychological Services: http://caps.gmu.edu
University Catalog: http://catalog.gmu.edu
University Policies: http://universitypolicy.gmu.edu

Addition resources on Excel & GIS

- https://infoguides.gmu.edu/c.php?g=564384&p=6105534
- https://infoguides.gmu.edu/geospatial/learn

*The instructor reserves the right to modify this syllabus, but will notify students about the change.