**GGS 304 Population Geography**

*Fall 2018, MW 12:00 – 1:15 pm, 2312 Exploratory Hall*

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**Office Hours**: Mon 2–3pm, Weds 3–4 pm. or by appointment

All issues and problems on the Earth, environmental and societal, are directly or indirectly related to human population. In fact, changes in population and human behavior are major sources of physical, environment and societal changes. In reverse, environmental and societal conditions affect population dynamics. A comprehensive understanding of the society problems and global change requires a thorough understanding of population characteristics and dynamics.

This course, meeting the 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.

**What to Expect? (Learning objectives)** The course will review basic demographic concepts. A major purpose of this course is to provide students an understanding of the spatial dimension of population and its relationships to natural resources, environment and various aspects of the society. This understanding can serve as the foundation of analyzing not only population issues, but almost all societal problems. The course will discuss both concepts (analytic) and facts (descriptive). Students are expected to learn concepts and models related to population growth, dynamics and distribution, and acquire tools/methods to analyze population issues. These tools and methods include measurements, statistics, models, theories, and maps. 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 expect to know basic spreadsheet commands (MS Excel or any compatible spreadsheet program). *Students with no prior experience in MS Excel are expected to gain basic understanding from watching training video(s) in Lynda.com. One possible video is "Learning Excel 2010 with Chris Grover." Additional resources are provided below. Those with no prior experience in ArcGIS should also watch the training video "Learning ArcGIS" in Lynda.com.* You are expected to complete these video trainings by **September 14**.

**Outcome**: After finishing this course, students are expected to have a better appreciation of global and local population issues. The students are also expected to develop a basic understanding of fundamental population-demographic concepts, theories, models, and methods, both spatial and aspatial, in analyzing population. Therefore, students will be evaluated by how much they comprehend these bodies of knowledge in terms of their ***definitions***, how they can be ***applied*** and ***interpreted***.

**Prerequisites**: 30 hours, completion of, or concurrent enrollment in, all university general education courses, or permission of instructor. ***This course satisfies the synthesis requirement of the Mason Core.***

**Text:** Thomas, R. K. (2018) *Concepts, Methods and Practical Applications in Applied Demography*. Springer.

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

**Assessment methods: (details below)**

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|---|---|
| 7 exercises | 100 (not equally weighted) |
| Exams | |
| Mid-term | 15 |
| Final | 25 |
| Report/Presentation | 30 in total (due on December 5) |
| | Report (20); Presentation (10) |
| Participation/attendance | 20/10 |
| Total: | 200 points |

The grades are "curved". The "average grade" will be a C+ or 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 assignments are late.
* 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 tests.

**GGS Computer Lab Access:** All GGS students should receive "swipe" access (using your Student ID) to the GGS Student Computer Lab (Room 2102, Exploratory Hall) upon registering for the course. If you experience problems accessing the lab, please see Samantha Cooke in the Main GGS Office (2400, Exploratory Hall).

**GGS Computer Lab Assistance:** If you experience problems with the computers (e.g., software or hardware issues) in the GGS Student Computer Lab (Room 2102, Exploratory Hall), please email GGS IT assistants at *ggsit@gmu.edu*.

**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 see me and 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

**Major Topics**:

***Fundamental Concepts***

1. Introduction (Ch. 1)
   Population Geography/Spatial Demography: What & Why?
2. Perspectives and Methods (Ch. 2)
3. Data and Tools (Ch. 3)
4. Population Size, Distribution and Concentration (Ch. 4)
5. Population Composition and Characteristics (Ch. 5)
   Compositions
   Analysis

***Demographic Processes***

6. Demographic Processes: Fertility (Ch. 6)
7. Demographic Processes: Mortality (Ch. 7)
8. Population Spatial Dynamics: Migration (Ch. 8)
9. Population Temporal Dynamics: history, change, and measurement (Ch. 9)

***Selected Applications of Demographic Analysis***

10. Business Demographics
11. Health Demographics
12. Political Demographics and others.

**Exercises:**
Seven exercises will be given out after relevant materials are covered in class throughout the semester. Specific instructions will be provided. All submissions should be in hardcopy in class, with 1 inch margin in all sides, 12-point font in Times New Roman, with page numbers, single-sided and double-spaced.

**Participation/attendance:**
Attendance will be taken occasionally. Students may have two "free excuses." Students will be asked to read sections of the text prior to classes, post questions online, and are expected to participate in class discussion in a meaningful and constructive manner.

**Report**:
To partially meet the synthesis requirements, students are required to submit a report/paper. Students have two options for this report:

1) **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 the course website 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 do they 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
- Major population issues in the country (all issues are related to population, but some are more population-oriented and more important than others)

2) **A summary-review and critique** of three studies published in peer-reviewed papers, demonstrating how demographic/population data can be used in some of the following areas ***spatially/geographically***:

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.

For each paper, the following sections, at the minimum, should be included:

- 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?

A list of potential journals will be provided on Blackboard.

**For both types of report:**

- 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). Beware of the definition of ***plagiarism*** and not to claim the credits that you do not deserve.
- The length of the report/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 paper is due on December 5. Earlier submissions will be appreciated.

**Presentation:**

At the end of the semester (may start on November 26), each student should give a concise 10 minutes or less presentation of 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. For those country reports, unique population characteristics or issues

of the chosen country may be highlighted. For those literature reviews, highlight the importance and utilities of demographic data analysis in both spatial and aspatial contexts.

**Addition resources on Excel**

- http://elearning.spacs.gmu.edu/2013/09/12/links-to-excel-videos-and-guides/
- https://club.gmu.edu/
- https://infoguides.gmu.edu/c.php?g=564384&p=6105534

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