GEOGRAPHY & GEOINFORMATION SCIENCE 415
Seminar in Geography
Spring 2019

Syllabus

1. INSTRUCTOR
   
   Instructor: Dr. Matt Rice
   Term: Spring 2019
   Class-Section (CRN): GGS 415- 001 (10947)
   Date-Time: Wednesdays, 1:30-4:10pm
   Classroom: GMU Exploratory Hall, Room 2103
   Faculty Office: GMU Exploratory Hall, Room 2202
   Faculty Office Hours: Wednesday, 4:00-5:00pm
   Instructor Email: rice@gmu.edu
   TA: TBD

   Virtual Office Hours: I can be reached via email to arrange office hours via phone or skype (m.t.rice), and I’ll be available via Blackboard Collaborate Sessions on a regular basis. I will respond to all student email within 24 hours, and even more quickly between Monday morning and Friday evening. Students must activate and use their GMU campus email to facilitate contact. Please use a subject line prefix tag: [GGS 415] and send general GIS and troubleshooting questions to the TA first. If the question or concern is administrative, contact me first.

2. COURSE DESCRIPTION

   This course is designed as a disciplinary capstone seminar on geography, and a GMU writing intensive course. The course focuses on the associated fundamental scientific principles, theories, and techniques of the discipline, including geographic information systems, quantitative analysis, research design, and research paper writing. Students will learn about the discipline of geography, its history, and its contemporary practice. Students will learn how to design and carry out a research project, with a focus on the organization and written elements. Students will learn modes and methods of academic research, as well as the basic elements of the academic peer-review process. Student will learn how the Earth’s features are modeled and stored in a computer information system. Students will learn how to use geographic information systems to answer geographic research questions and how to perform simple analytical procedures using geographic data. The writing intensive nature of the class means that students will devote time to successfully complete several written assignments of at least 3500 words, with feedback on drafts, revisions, editing, formatting, and citations.

   Credit Hours for this course: 3
3. COURSE PREREQUISITES

Course prerequisites include GGS 300 (Quantitative Methods for Geographic Analysis) and GGS 310 (Introduction to Digital Cartography). Some students may find GGS 110 (Maps and Mapping) and GGS 311 (Intro. To GIS) useful, but they are not required.

4. COURSE EXPECTATIONS

1. Students are expected to attend class each week and to come to class prepared, having read the assigned reading material in advance.
2. This class requires dedication and organization. Proper preparation is expected every week. You are expected to log in to Blackboard each week and complete the assignments and activities on or before the due dates.
3. Students must check their GMU email messages on a daily basis for course announcements, which may include reminders, revisions, and updates.
4. It is expected that you will familiarize yourself with and adhere to the Honor Code. Student members of the George Mason University community pledge not to cheat, plagiarize, steal, and/or lie in matters related to academic work.
5. It is essential to communicate any questions or problems to me promptly.

5. LEARNING COMMUNITY

This course is taught both in person and via Blackboard Courses (Log into http://mymason.gmu.edu, select the Courses Tab, and the course can be found in the Course List).

This course may use Blackboard Collaborate sessions. In order to participate, you must be at a computer with a microphone and optionally, a video camera.

In our online interactions, we must be respectful of one another. Please be aware that innocent remarks can be easily misconstrued. Sarcasm and humor can be easily taken out of context. When communicating, please be positive and diplomatic. I encourage you to use netiquette during any online discussions.

6. LEARNING OUTCOMES

By the end of this course, students will be able to:
1. Demonstrate a broad knowledge-base of the fundamental scientific theories, principals and techniques of the discipline of geography.
2. Demonstrate an understanding of the societal context of geographic practice, and articulate important historical events, contemporary developments, and future trends that shape the discipline of geography.
3. Apply and demonstrate key concepts of spatial analysis using commercial GIS software.
4. Given a specific geographic research problem, identify problem parameters, characterize data needs, assemble data, and perform analysis.
5. Effectively communicate results of analysis using written form, as well as with maps and graphics produced with GIS.
6. Develop the ability to edit and revise written documents through feedback, toward a goal of a final written research paper.
7. TECHNOLOGY REQUIREMENTS & EXPECTATIONS

General Hardware:
To complete this class and use Blackboard effectively, you will need access to a Windows or Macintosh computer with at least 4 GB of RAM and to a fast and reliable broadband Internet connection (e.g., cable, DSL). A larger screen is recommended for better visibility of course material. You will need speakers or headphones to hear recorded content and a headset with a microphone is recommended for the best experience. For the amount of Hard Disk Space required to take a course such as this, consider and allow for: 1. The storage amount needed to install any additional software and 2. Space to store work that you will do for the course. If you are considering the purchase of a new computer, please go to http://patriotech.gmu.edu/ to see recommendations. Review detailed hardware minimum specifications provided by Esri, the vendor of the GIS software we use for this course. If you do prefer, you can complete the work for this class using the ArcGIS software in the GGS student lab.

Software:
This course uses Blackboard as the learning management system. You will need a browser and operating system that are listed compatible or certified with the Blackboard version available on the myMason Portal. See supported browsers. Log in to myMason to access your registered courses. Some courses may use other learning management systems. Check the syllabus or contact the instructor for details. Online courses typically use Acrobat Reader, Java (Windows), and QuickTime. Your computer should be capable of running current versions of those applications. Also, make sure your computer is protected from viruses by downloading the latest version of Symantec Endpoint Protection/Anti-Virus software for free at http://antivirus.gmu.edu. Students owning Macs or owning computer running Linux should be aware that some courses may use software that only runs on Windows, including the primary software tool for this class, ArcGIS 10.5.1 for Desktop. You can set up a Mac computer with Boot Camp or virtualization software so Windows will also run on it. This following webpage https://support.apple.com/en-us/HT201468) contains information about using Windows on a Mac in bootcamp mode. It is also possible to run Windows using a virtual machine on your Mac. Search “running windows on my Mac”. Computers running Linux can also be configured with virtualization software or configured to dual boot with Windows. Setting up Windows on your Mac can be a bit complicated, and will require some technical support, which may be provided through GMU Patriot Tech.

Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.

Geographic Information Systems Software
You will need to be able to use a computer to participate in the course and complete the required work. You will not be required to purchase GIS software, but will have a student GIS evaluation version provided for you. You must install and use this student GIS software to complete the course, or otherwise have access to ArcGIS v.10.5.1. This will require administrator-level access and control of a Windows PC computer that you must use to complete the GIS exercises. If you have convenient, frequent access to a computer with ESRI’s ArcGIS 10.5 installed and running, you may be able to this computer for the GIS exercises.

The course will be taught with the help of Blackboard, accessed through https://mymasonportal.gmu.edu. Submission of assignments, participation in discussions, and all assessment testing will be done with Blackboard.
Lectures will be delivered in person as well as through narrated, pdf slides, created using MS PowerPoint. Each lecture can be viewed by opening the pdf document in Adobe Acrobat.

8. REQUIRED & RECOMMENDED TEXTBOOKS

Textbooks must be purchased and available prior to the first day of class (January 23rd)

**REQUIRED**

**Making Sense in Geography and Environmental Sciences: A Student’s Guide to Research and Writing, 6th ed.**
Margot Northey, David B. Knight, and Dianne Draper (eds.). ISBN: 978-0-19-544582-4,

**REQUIRED**

REQUIRED


OPTIONAL


NOTE: This book is available as an electronic resource through the Fenwick Library’s Digital Collections: Follow the online resource link in the catalog record, while on campus or after authenticating with your MASON NetID: http://magik.gmu.edu/cgi-bin/Pwebrecon.cgi?BBID=3516028
9. PERFORMANCE-BASED ASSESSMENTS

You will achieve the course learning outcomes (Syllabus Section 6) through attending and participating in course lectures, reading the textbooks, preparing and writing reading summaries when required, participating in class discussions, working through GIS tutorials, completing written assignments, and completing a course research paper, with associated submissions.

a. Written Assignments: Each student will prepare several written assignments of variable length based on the textbook readings and course content from lecture material. The written assignments will be graded on both content and form, and collectively will be worth 25% of the final grade. See the Written Assignment Grading Rubric below.

b. Class Discussions and Learning Activities: Each student will participate in student-led class discussions and group learning activities, both in class and via Blackboard discussion tools. The class discussions and learning activities will be based on course material, assigned readings, and experiential (hands-on) learning exercises. The
class will also participate in professional development activities that will be integrated with course material. These activities will be collectively worth 5% of the final grade.

c. **Methodology Exercises**: There will be 4 separate GIS-based methodology assignments, focused on geographic data collection, analysis, graphical presentation, cartographic methods, and general world geography. These exercises will be worth 20% of the final grade.

d. **Final Research Paper**: Students will prepare a final research paper for the course, which will be due on the final day of class. This paper will have several deliverables throughout the term, each of which will be graded and will contribute to the student's final grade. The process of writing the course research paper will include the development of a pre-proposal, article abstracts, a formal project proposal, data checks, map checks, and a full-length draft of at least 1500 words. Feedback on this full-length draft will contribute to a substantially revised final paper of at least 2000 words, which will be due at the end of the term. The research paper will be worth 35% of the grade.

e. **Final Examination**: Students will prepare a final examination based on course readings and discussion. This exam will be released via Blackboard on the last day of class and will be due on the final exam date. This final exam will be worth 15% of the grade.

**10. GRADING SUMMARY**

Students will be evaluated in the following areas, with the following grade weighting:

**Written Assignments (25%)**
**Class Discussions & Participation (5%)**
**Methodology Exercises (20%)**
**Final Research Paper (35%)**
**Examination (15%)**

Grades are assigned using a standard scale:

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<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>A+</td>
<td>&gt; 99+</td>
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<tr>
<td>A</td>
<td>93 – 98.9</td>
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<tr>
<td>A-</td>
<td>90 – 92.9</td>
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<tr>
<td>B+</td>
<td>87 – 89.9</td>
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<tr>
<td>B</td>
<td>83 – 86.9</td>
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<tr>
<td>B-</td>
<td>80 – 82.9</td>
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<tr>
<td>C+</td>
<td>77 – 79.9</td>
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<tr>
<td>C</td>
<td>73 – 76.9</td>
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<tr>
<td>C-</td>
<td>70 – 72.9</td>
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<tr>
<td>D</td>
<td>60 – 69.9</td>
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<tr>
<td>F</td>
<td>0 – 59.9</td>
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**11. RUBRICS**

**Written Assignments**
(1) **Instructions:**
Each student will prepare a series of written assignments based on course readings, web material, journal articles, class lectures, and other assigned material. The written assignments will be evaluated and assessed by the Instructor and Teaching Assistant using the standard rubric below. Written assignments should be concise, comprehensive syntheses of the assigned material, and can include quotes, references, and relevant personal experiences or anecdotes. The length of a typical written assignment will be 200-500 words, unless otherwise indicated.

(2) **Rubric** (Adapted from http://ctfe.gmu.edu/teaching/grading/sample-rubric-for-grading-a-research-paper/)

| Criteria                  | Outstanding                                                                 | Good                                                                 | Fair                                                                 | Poor                                                                 |
|---------------------------|-------------------------------------------------------------------------------|                                                                     |                                                                      |                                                                      |
| **Organization**          | Written Assignment includes a short introduction, a body, and a short synopsis, and is well organized | The Written Assignment is missing an introduction or synopsis and has minor organizational errors | The Written Assignment is missing an introduction and a synopsis and is poorly organized | The Written Assignment lacks coherent organization and structure and is missing an identifiable introduction, body, and synopsis |
| **Length**                | 200-500 words                                                                | Minor length deviation (<20%)                                       | Major length deviation (20%-40%)                                     | Length does not adhere or approach length requirements (> 40% deviation) |
| **Syntax**                | Correct grammar and syntax                                                     | Minor syntax, grammar, and spelling errors                         | Multiple syntax, grammar, and spelling errors throughout Written Assignment | Written Assignment is replete with syntax, grammar, and spelling errors |
| **Research and Content**  | The Written Assignment contains relevant material from the lecture and assigned content material, and extends the material through a well-presented synthesis | The Written Assignment contains material from the lecture and assigned content, with minor deficiencies, omissions, or irrelevant content | The Written Assignment only partially relates to the assigned content and lecture material and contains much irrelevant content | The Written Assignment does not relate to the lecture or readings at all |
| **Points**                | 90-100                                                                        | 75-90                                                               | 50-75                                                               | 50 or less                                                         |

**Methodology Exercises**

Each methodology exercise will be worth 20 points, with 1 point for each substantive answer indicated in the assigned problem set, or other significant methodological step. With regard to numerical answers, a complete answer with the relevant units will be worth full credit for that problem. Students start with 20 points and receive a 1 point deduction for incorrect answers or incorrect execution of a method, and a ½ point deduction for minor errors such as a lack of units where required. Incorrect or incomplete answers not including an omission of units (ft., yards, acres, miles, meters, etc.) will receive a full point deduction. Methodology exercises will have a full written evaluation and specific indicators of reasons for point deductions. Methodology exercises should be submitted through Blackboard in Microsoft Word format or other relevant format as specified in the assignment. Cartographic work must be submitted in PDF format in highest quality.
(1) **Instructions:**
Each student will prepare a final research paper based on a pre-defined research proposal, literature review, analysis, synthesis, ancillary material, journal articles, class lectures, and other assigned material. The research paper will be evaluated and assessed by the Instructor and Teaching Assistant using the standard rubric below. The research paper should be a comprehensive synthesis of the proposed topic and can citations, quotes, illustrations, maps, graphics, images, references, and any other relevant material. The length of the research paper proposal will be 300-500 words, the draft paper submission will be at least 1500 words, and the final paper will be at least 2000 words, or approximately 7-12 pages, double spaced, exclusive of graphics, maps, images, charts, tables, and references.

(2) **Rubric** *(Adapted from http://ctfe.gmu.edu/teaching/grading/sample-rubric-for-grading-a-research-paper/)*

<table>
<thead>
<tr>
<th>Research paper Rubric</th>
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<tbody>
<tr>
<td><strong>Criteria</strong></td>
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<tr>
<td><strong>Organization</strong></td>
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<td><strong>Length</strong></td>
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<td><strong>Syntax</strong></td>
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<td><strong>Research and Content</strong></td>
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<td><strong>Points</strong></td>
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### 11. COURSE SCHEDULE

You are responsible for keeping up with the textbook readings, lectures, Written Assignments, discussions, GIS tutorials/methodology exercises, and assessments. No makeup exams will be available. Readings assigned for the week & session should be completed before the scheduled date. **Any changes to this schedule will be announced via email and posted to the course Blackboard page.**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Hanson (10 ideas)</th>
<th>Northev et al. (Making Sense)</th>
<th>Regional Focus</th>
<th>Speck (Walkable City)</th>
<th>Methodology Assignments</th>
<th>Course Project &amp; Written Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Jan 23</td>
<td>Course overview and introduction, Syllabus Review</td>
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<tr>
<td>Week 3</td>
<td>Feb. 6</td>
<td>1. Thinking and Writing pp.1-20</td>
<td>United States</td>
<td>Walking, The Urban Advantage, pp.17-36</td>
<td>Library Research (attend)</td>
<td></td>
</tr>
<tr>
<td>Week 5</td>
<td>Feb. 20</td>
<td>3. Writing and Reading Lecture Notes pp.58-67</td>
<td>United States</td>
<td>The Wrong Color Green pp.51-64</td>
<td>Written Assignment 1: Personal Travel Narrative</td>
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<tr>
<td>Week 7</td>
<td>Mar. 6</td>
<td>5. Writing an Essay pp.75-93</td>
<td>North America</td>
<td>Step 1: Put Cars in Their Place pp.75-104</td>
<td>Written Assignment 2: Geographic Sub-disciplines</td>
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<tr>
<td>Week 8</td>
<td>Mar. 13</td>
<td>Spring Break (March 11 – 17)</td>
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<tr>
<td>Week 11</td>
<td>Apr. 3</td>
<td>8. Participation, Group Work, Presentations pp.133-152</td>
<td>Africa</td>
<td>Step 4: Let Transit Work pp.139-163</td>
<td>Data Check (#4)</td>
<td></td>
</tr>
<tr>
<td>Week 12</td>
<td>Apr. 10</td>
<td>11. Doing Field Work and Writing about It pp.173-185</td>
<td>Africa</td>
<td>Step 5, 6: Protect the Pedestrian, Welcome Bikes, pp.163-212</td>
<td>Maps &amp; graphics check (#5)</td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td>Apr. 17</td>
<td>12. Illustrating Your Work pp.185-214</td>
<td>Latin America</td>
<td>Step 7.8: Shape the Spaces, Plant Trees, pp.213-236</td>
<td>Final Course Paper (draft) due</td>
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</table>

**Finals**

The take-home Final Exam will be released via Blackboard on May 1st, and will be due on Wednesday, May 8th at midnight. There is no in-class final exam for this course.
12. STUDENT EXPECTATIONS

Academic Integrity

It is expected that students adhere to the George Mason University Honor Code as it relates to integrity regarding coursework and grades. The Honor Code reads as follows:

“To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this: Student members of the George Mason University community pledge not to cheat, plagiarize, steal and/or lie in matters related to academic work.”

More information about the Honor Code, including definitions of cheating, lying, and plagiarism, can be found at the Office of Academic Integrity website at https://oai.gmu.edu

Discussion of work among students is encouraged. Collaboration and active participation in group discussions is important, but final work should reflect your own thinking and all submitted assignments must be in your own words and reflect your individual work. I reserve the right to use GMU-sanctioned tools for detecting and documenting plagiarism. If you have questions about what constitutes plagiarism, please ask me.

MasonLive/Email (GMU Email)

Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account. [See http://masonlive.gmu.edu/]

Patriot Pass

Once you sign up for your Patriot Pass, your passwords will be synchronized, and you will use your Patriot Pass username and password to log in to the following systems: Blackboard, University Libraries, MasonLive, myMason, Patriot Web, Virtual Computing Lab, and WEMS. [See https://password.gmu.edu/index.jsp].

University Policies

Students must follow the university policies. [See http://universitypolicy.gmu.edu].

Responsible Use of Computing

Students must follow the university policy for Responsible Use of Computing. [See http://universitypolicy.gmu.edu/policies/responsible-use-of-computing].

13. DIVERSITY

Diversity is an important in an academic environment, and is a priority for George Mason University. See: http://ctfe.gmu.edu/professional-development/mason-diversity-statement/

“George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal
growth. An emphasis upon diversity and inclusion throughout the campus community is essential to achieve these goals. Diversity is broadly defined to include such characteristics as, but not limited to, race, ethnicity, gender, religion, age, disability, and sexual orientation. Diversity also entails different viewpoints, philosophies, and perspectives. Attention to these aspects of diversity will help promote a culture of inclusion and belonging, and an environment where diverse opinions, backgrounds and practices have the opportunity to be voiced, heard and respected.”

14. RELIGIOUS HOLIDAYS

I am generally aware of some religious holidays and observations, and will help minimize difficulties for students of different faiths in terms of scheduling course assignments. It is the student's responsibility to speak to me in advance should their religious observances impact their participation in class activities and assignments. [See: http://ulife.gmu.edu/calendar/religious-holiday-calendar/ ]

15. SPECIAL NEEDS

If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with the Office of Disability Services (SUB I, Rm. 2500; 993-2474; http://ds.gmu.edu/) so that they can make a determination about the accommodations you need; and 2) communicate with me to discuss your accommodation needs or have the Office of Disability Services do so. I can provide proper accommodations with documentation and professional advice from the Office of Disability Services.

16. STUDENT SERVICES AND UNIVERSITY RESOURCES

University Libraries
The George Mason University Libraries provides resources for distance education students. For access to these resources and services, see http://library.gmu.edu/for/online.

Writing Center
The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. [See http://writingcenter.gmu.edu]. You can now sign up for writing assistance through the Office of Digital Learning’s Online Writing Center [see http://odl.gmu.edu/resources/writing-center/ ]

Counseling and Psychological Services
The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See http://caps.gmu.edu].

Family Educational Rights and Privacy Act (FERPA)
The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights. [See http://registrar.gmu.edu/ferpa/ ]