GGS 307: Sustainable Development (Spring 2014)
Department of Geography and GeoInformation Science
College of Science
George Mason University

Syllabus

Instructor: Allison A. Richards **Email:** aricha16@masonlive.gmu.edu
Title: Sustainability Analyst; PhD Student Environmental Science & Policy
Office Hours: Mondays 10:30 AM – 12: 30 PM (appointment preferred)
Office: Exploratory Hall, Room 1102, Cubicle 1102-TT

Co-Instructor: Joseph Mbuh **Email:** mmbuh@masonlive.gmu.edu
Office Hours: Wednesdays 10:00 am – 12:000 pm (appointment preferred)
Office: Exploratory Hall, Room 1102, Cubicle 102-U

Credit Hours: 3
Meeting Days & Time: Monday, Wednesday & Friday 9:30 AM – 10:20 AM
Meeting Room: Thompson Hall 2021
Website: Blackboard

The **Prerequisites** for this course is 60 hours of coursework; GGS 112 and GGS 302 or permission from the instructor.

Course Description

This course will explore the concepts, applications, and tools for analysis and decision making in support of environmentally sustainable, socially responsible and economically prosperous development. Case studies and problem-solving exercises will be used to stimulate learning and provide practical experience in addressing sustainable development issues.

Learning Objectives:

Upon completion of this course, students should be able to:

1. Articulate key theories and concepts of sustainable development.
2. Articulate the major issues affecting sustainable development.
3. Identify and apply methods for assessing the achievement of sustainable development, how do we measure progress? What are the tools used for decision-making.

Texts: There is no required text for this course. Reading materials will be posted on the class website.

Instructor's Expectations:

1. **Attendance at class is required**. Students are to notify the instructor prior to absence from class by phone, in person, or in writing. After 3 absences, the instructor will deduct 5 percentage points from the participation portion of your grade and will deduct additional points for continued absences. Arriving 15 minutes after the start of class is considered an absence.
2. **During class.** The class will include many discussions and debates, it is therefore expected that we will respect each other's opinions, especially those we disagree with and not interrupt others while speaking.
3. **Electronics:** The use of cell phones and pagers are prohibited, they should be **off** at times during class (not on silent or vibrate). Please be respectful of your peers and your instructor in the use of all electronics (including laptops). Do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism and may affect your participation grade.
4. **Complete the assigned readings BEFORE you arrive in class**. Participation is a part of your grade.
5. **All assignments should be of the highest quality and be free from errors.** The GMU Writing Center provides free services to assist with writing (http://writingcenter.gmu.edu/index.php).
6. **Communicate** your ideas, frustrations, and enthusiasms about GGS 307 with me. I want to know what's working and not working for you in GGS 307.
7. **Aiding and abetting dishonesty, cheating, and plagiarism are forbidden**. See university Honor Code.

Requirements and Grading:

Leading Class Discussion	10%
Participation	10%
Assignments	10%
Mid-Term Exam (take home)	30%
Presentation of Final Research Paper	10%
Final Research Paper	30%

Graded Components

1. Participation

Your participation will be assessed on the following criteria

(1) Absent (without prior notification and instructor-agreed make-up)

(2) Attend but do not contribute to discussion

(3) Attend and participate (contribute substantively and actively, display evidence of preparation and knowledge of subject areas)

2. Leading and facilitating class discussion of peer-reviewed journal article

Each week one student leads and facilitates class discussion of a peer reviewed journal article relevant to topics covered in this course. The articles or the citation including reference to resources available through Mason's library **must** be circulated to the class one week prior to the discussion i.e., the Friday before you lead.

3. Final Research Paper and Presentation

Your final research papers should be **10-15 pages double spaced, font size 12 points** (not including references). All materials used should be appropriately cited and must be credible (journal articles, books etc.). Chose a reference style (e.g. APA, MLA) and be consistent. Using more than 1 style will result in deductions. Zotero, the GMU approved end note system is recommended (https://www.zotero.org/).

You will be expected to present your papers during the 2 weeks of the semester.

Your papers and presentations will be graded based on content (clear ideas and opinions supported by evidence), design (organization, coherent, readability) and mechanics (grammar, spelling, punctuation, use active and not passive verbs, be concise, etc.), delivery etc. Rubrics will be provided.

4. Examination

There will be a take-home mid-term exam which will include a combination short answer, short essays and multiple choices or fill in the blanks questions. **There will be no final exam ☺.**

Academic Integrity

The GMU Honor Code (below) which we all pledged to adhere to as members of the Mason community, will be enforced at all times.

"Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work." (http://oai.gmu.edu/the-mason-honor-code/).

Disability Accommodations

If you are a student with a disability and you need academic accommodations, please communicate this to me at the beginning of the course and contact the Office of Disability Services (ODS) at 703.993.2474. All academic accommodations must be arranged through that office (http://ods.gmu.edu/)

Email Policy

GMU faculty and staff may only correspond with students through the students' GMU assigned email accounts. Emails sent from other accounts will not necessarily be answered. Course

information will be shared via email. Please notify me if you would like your email to remain private and not shared with your classmates.

Diversity

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.

Class Schedule[1]

Week	Date	Topic
Week 1	Wed. Jan 22	- Weather delay – No Class
	Fri. Jan 24	- Course introduction and overview
Week 2	Mon. Jan 27 –	- Introduction to the concept of Sustainable Development (SD) - what is SD and sustainability; - Is there a difference between sustainable development and sustainability? **REQUIRED READINGS:** 1. Vos, Robert O. (2007). Defining Sustainability: a conceptual orientation. *Journal of Chemical Technology and Biotechnology*, 82, 334-339. 2. Kates, Robert, Thomas M. Parris, and Anthony A. Leiserowitz. (2005). What is sustainable development? Goals, indicators, values, and practice. Environment: *Science and Policy for Sustainable Development*, 47, 3, 8-21. **Other Recommended Reading** 3. Redclift. (2005). Sustainable Development (1987-2005): An oxymoron comes of age. Sustainable Development. 13, 212-227.
	Wed. Jan 29	- The SD timeline (World Commission on Environment & Development, 1987; United Nations Conference on Environment & Development, 1992 and Agenda 21; World Summit on Sustainable Development, 2002; Rio +20). - Major SD Conferences and Agreements - Discuss Final Paper and Presentation

[1] This is a tentative schedule and may change during the course of the semester.

Week	Date	Topic
		- **REQUIRED READING:** The Future We Want – outcome document to Rio+20 UNCSD. pages 14 -17 - http://sustainabledevelopment.un.org/content/documents/733FutureWeWant.pdf
	Fri. Jan 31	- Student led paper discussion - **Troy Lowery**
Week 3	Mon. Feb 3 –	- The environmental, economic, social and political dimensions of SD. We will assess what the main issues and challenges affecting SD at the local, regional and global levels are? We will discuss "how things got to be this way"/why did we need SD? The issues will also be examined within the context of the Millennium Development Goals (MDGs).
	Wed. Feb 5	- Weather delay – No Class
	Fri. Feb 7	- Student led paper discussion – **Derek Doddridge**
Week 4	Mon. Feb 10 –	- Bringing all the issues together. Layers of SD – local (campus, city), national, regional and global levels. Case studies on sustainable development in practice. What are some of the programs, projects and other initiatives being practiced? What are the approaches being used? Who are the stakeholders and what are their roles? What are the issues and challenges? Are the approaches and methods practical, transferable or replicable? - We will try and have presentations from representatives of local level (GMU and Fairfax County) SD initiatives.
	Wed. Feb 12	**Guest Presenter :** - Stefanie Kupka, Sustainability Coordinator, City of Fairfax
	Fri. Feb 14	- **Assignment 1: due** **Guest Presenter:** - Noel Kaplan and Kambiz Agazi, Fairfax County Planning and Zoning Dept.
Week 5	Mon. Feb 17 -	- SD at the regional, national and global level continued - What are the priorities for SD in the US - SD in developing countries
	Wed. Feb 19	***Guest Presenter:*** - Margaret Lo, Mason Office of Sustainability

Week	Date	Topic
		- Dan Waxman, Axillary Enterprise (AE) Green
	Fri. Feb 21	- Student led paper discussion – **Ashley A. Strobridge**
Week 6	Mon. Feb 24 – Wed. Feb 26	- SD at the local, national, regional and global level continued - Recap Guest lectures, discuss specific issues - **Final Paper Topic Submission Feb 26**
	Fri. Feb 28	- Student led paper discussion – **Jennifer Searight**
Week 7	Mon. Mar 3	**Guest Presenter :** - **Alon Tal (guest of the Mason Water Forum)**
	Wed. Mar 5	- Review for mid-term - Mid-term distributed at 5pm
	Fri. Mar 7	- Make-up class for weather cancellations - Mid-term exams due by 11:59 pm
	Mar 10-14	- **SPRING BREAK**
Week 8	Mon. Mar 17 – Wed. Mar 19	- Selected SD challenges in depth (Climate and Global Change, Energy, Water Resources, Population, Economic Development, etc.). This will be adjusted based on the interest of the students and priority issues identified and agreed on by the class.
	Fri. Mar 21	- Student led paper discussion – **Vinson Corbo**
Week 9	Mon. Mar 24; Wed. Mar 26;	- Selected SD challenges in depth continued - **Literature Review and Methodology for Final Paper due**
	Fri. Mar 28	- Student led paper discussion – **Perla Farias**
Week 10	Mon. Mar 31; Wed. Apr 2	- Selected SD challenges in depth
	Fri. Apr 4	- Student led paper discussion – **Dan Stock**

Week	Date	Topic
Week 11	Mon. Apr 7; Wed. Apr 9;	- Problem-solving, metrics, and tools for sustainable development – e.g. life cycle analysis; sustainability indices and rating systems; Carbon, water and ecological foot printing; GHG Inventory; Environmental Performance indicators; UN Millennium Development Goals; Environmental Management Systems. We will examine the techniques and methods and use case studies to see their application.
	Fri. Apr 11	- Student led Discussion – **Paige Davis**
Week 12	Mon. Apr 14 Wed. Apr 16	- Problem-solving, metrics, and tools for sustainable development continued. We will also devote to time to discussing the final papers and presentations.
	Fri. Apr 18	- Student led Discussion – **Jade Pearce**
Week 13	Mon. Apr 21;	- **Research Day** (No class but I will be available for consultation on final research papers and presentations)
	Wed. Apr 23; Fri. Apr 25	- **Final Presentations**
Week 14	Mon. Apr 28; Wed. Apr 30; Fri. May 2	- **Final Presentations** - **Course Evaluations due**
Week 15– 16	Mon. May 5	- **Last Day of class**
	Wed. May 7	- **Final Papers due Wed. May 7**
	May 7 - 14	Exam Period