

Meeting Time: Thursday 4:30 – 7:10 pm
Room: Exploratory Hall 2310
Credit Hours: 3

FACULTY CONTACT INFORMATION:

Name : Maction Komwa, PhD
Room : 2414 Exploratory Hall
Office Hours: MTW – 2:00 pm – 3:30 pm or by appointment
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Teaching Assistant:

TBA
Office: Exploratory Hall GTA Office Space #

Catalog description:

Sustainability lies at the intersection of the environment, society and economics. This course explores the concepts of sustainable development at different geographical scales (local, national and international). We examine the applications, indicators, measurement tools of sustainable development for analysis and decision making in support of environmentally sustainable development from a geographic perspective. Case studies and problem-solving exercises will be used to stimulate learning and provide practical experience in addressing sustainable development issues.

Student Learning Objectives:

Upon course completion, a student will be able to:

- Examine critically the 17 newly minted UN Sustainable Development Goals
- Understand the historical evolution, key theories, and concepts of sustainable development.
- Articulate the major issues affecting sustainable development and how sustainable development can be achieved in practice.
- Identify and apply methods for assessing the achievement of sustainable development
- Discover the science, technology, economics, and politics underlying the concepts of sustainability.
- Understand the implications of overuse of resources, population growth and economic growth and sustainability.
- Explore the challenges the society faces in making transition to renewable resource use.
- Analyze arguments, similarities, and disagreements in the sustainability debate.
- Develop skills that will enable students to understand attitudes on individuals, society and their role regarding causes and solutions in the field of sustainable development.
- Apply critical thinking skills to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources.
- Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

Required Course Materials: Exploring Sustainable Development: Geographical Perspectives. Edited by Martin Purvis and Alan Grainger.

Teaching and Assessment

GGS 307/507 is being offered as a combined undergraduate and undergraduate course. Our weekly meetings will comprise lectures, group or student-led discussions, guest lecturers, and class videos. Active participation is required in all sessions for students to pass this course.

Assignments and Grading

Grading and assessment will be based on the combination of different assignments described below:

Assessment	% (of final grade)	Assessment	% (of final grade)
Written Assignments [x 4] [Assigned readings, lectures, discussions, simulation	15%	Written Assignments [x 4] [Assigned readings, lectures, discussions,	15%
Participation [Discussion both online and in-class activities	5%	Participation [Discussion both online and in-class activities]	5%
Short Quizzes x 3 [Practice]	5%	Short Quizzes x 3 [Practice]	5%
Exam 1	15%	Exam 1	15%
Exam 2	20%	Exam 2	20%
Group Presentation	10%	Draft Paper for Peer-Review	5%
Final Exam	30%	Final Paper	25%
No Final Paper	-	Student Presentation	10%
Total	100%	Total	100%

Policy on missed Exams and Assignments

- Late assignments will be penalized at 5 points per day. Short Writing Assignment submitted more than 5 days late automatically will be marked Zero. The Instructor will provide instructions on which assignment should be submitted through the Blackboard.
- There will be no make-ups on Quizzes, In-class activities and Discussion
- Make-up exam will only be accepted if you provide compelling evidence or in the case of university-excused absences.

Grading Scale

The following will be your Letter Grade and Percentages to determine your final grade for this course

Grade	Percentage	Grade	Percentage	Grade	Percentage	Grade	Percentage
A+	98 -100%	B+	87 – 89%	C+	78 – 79%	F	below 60%
A	93 -97%	B	83 – 86%	C	70 – 77%		
A-	90 -92%	B-	80 – 82%	D	60 – 69%		

Examination – There will be three in-class *closed-book* examinations [*Exam 1 & 2 and a final examination* for undergraduates and two-exams [*First Exam and Mid-Term Exam*] for Graduate Students.

We'll take some time to talk about study strategies and answer any possible review questions you may have a week before the exam.

- *GGS 307 students - Each exam will contain objective (multiple-choice) and short-answer questions, and Fill-in the blank questions.*
- *GGS 507 students – You will need to get a Blue-book (from the Bookstore) which you will use to answer short- answer and essay type questions [No Multiple-Choice Questions].*

In-class Simulation Activities

Additionally, there will be reading assignments from time to time derived from your textbook and assigned articles that will be posted through the Blackboard. Through the discussion/debate and simulation activities, students will have the opportunity to gain an in-depth understanding of another person's perspective on the subject matter.

Online Class Discussions – There will be bi-weekly discussions unless otherwise stated through the Blackboard. I will lead the discussion by posting a topic related to the concepts and readings of the week. You will then follow-up with thought-provoking comments that foster interaction and discussion and demonstrate participation in class. Your original post should focus on the topic of the week. Additionally, I encourage you all to read other student's posts and make a short response to their posts. Be sure to post on time. Late posts will not be graded. Strictly - no make-up for on-line discussion or in-class activity.

Final Project

The final project is a unique opportunity for students to utilize and apply concepts learned in class. Students will design a research project that addresses a real-world development challenges involving sustainability. The focus of the research project can be any topic that will promote sustainability practices. Details of the project will be posted through the Blackboard.

- ✧ **GGS 307 students** - will complete the project in groups of 3-4. You will form a group based on the theme of your research interest for this course.
 - *No final written paper will be required - Group Presentation Only.*
- ✧ **GGS 507 students** – this will be an individual project. – Both presentation and Final Paper will be required.

Note: SafeAssign (Blackboard Plagiarism Prevention Tool) will be used to check all your written submissions for plagiarism.

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. Gmail or Yahoo accounts etc. will not be acknowledged.

Course policies/My Expectations:

1. Students are expected to attend (on time) each class and be engaged when they are in class. The class will be interactive if all of us will be involved in discussing and learning the material.
2. For any planned absence, please inform the instructor in advance. It will be your responsibility to track down any missed material, assignments, etc. Any missed work without any supporting evidence will not be accepted.
3. Should circumstances arise that make you late, do not disrupt the class as you enter, take the first available seat and do not walk across the room.
4. In the event of any class cancellation, including inclement weather (e.g. snow), the class will resume where we left off, adjustments, if necessary, will be made later.
5. All students should be respectful to all other students in class or during debate or class discussion forum and simulation activities. It is common knowledge to say that people have different opinions, values and concerns during any assigned debate/discussion, therefore, it is important to maintain respect during class debated and discussion.
6. You should submit your own work in all your written assignments unless otherwise stated like in group activities or group project.
7. Cell Phones must be turned off during class. Zero tolerance!

What you can expect from me:

- There will be fair assessment of student work and treat each member of our class with respect.
- Will return your work on time
- Clear communicate of course information
- Available for any additional assistance during my office hours or any other arranged times and respond to your emails on time.

Academic Honesty: George Mason University operates under an honor system, which is published in the University Catalog and deals specifically with cheating, attempted cheating, plagiarism, lying, and stealing. Please familiarize yourself with the honor code, especially the statement on plagiarism (<http://www.gmu.edu/org/honorcouncil/guidelines.htm>). I will respond to acts of academic misconduct according to university policy concerning **plagiarism**. In such cases **Plagiarism** will result in a failing grade of the assignment in question and/or for the course.

University Services

George Mason University has several academic support and other resources to facilitate your success. Some of these resources are presented below:

- i. Counseling and Psychological Services [<http://caps.gmu.edu/>]
- ii. University Career Services [<http://careers.gmu.edu/>]
- iii. Writing Resources: Tutors at the Writing Center are available to assist you: Robinson B, Room 213, 703-993-1200, writingcenter.gmu.edu
- iv. University Catalog: <http://catalog.gmu.edu/>
- v. University Policies: <http://universitypolicy.gmu.edu/>
- vi. Library Study Rooms: library.gmu.edu/use/study-rooms
- vii. Student Technology Assistance & Resource Center (STAR): Provides all kinds of technology support: JC, Room 229, 703-993-8990, bit.ly/2hWjI0y
- viii. Student Support & Advocacy Center: Assistance regarding healthy lifestyle and educational choices: SUB I, Suite 3200, 703-993-3686, ssac.gmu.edu

Students with Disabilities

Students with documented and qualifying learning, physical and psychological disabilities should contact the Disability Services (ODC), which arranges for reasonable accommodations in accordance with the Americans with Disabilities Act and University policies. In order to arrange accommodations in each course, the student must present his/her professors with a letter from the ODC outlining the recommended accommodations at the beginning of the semester. Disability Services (ODC) website: ds.gmu.edu - SUB I, Room 2500. Telephone: (703) 993-2474.

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking

As a faculty member, I am designated as a “Responsible Employee,” and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1412. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (703-380-1434) or Counseling and Psychological Services (CAPS) (703-993-2380). You may also seek assistance from Mason’s Title IX Coordinator by calling 703-993-8730 or emailing cde@gmu.edu.

Diversity Statement

GMU promotes a living and learning environment for outstanding growth and productivity among its students, faculty, and staff. 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 includes, but is 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.

Email Policy: No emails from other accounts (e.g. Gmail; Yahoo, etc.) will be acknowledged. Please use your student GMU Email account only if you want to communicate with your Instructor!

Tentative Schedule & Readings

Week Date		Topic Description	Readings	Homework Activity Due date
1	1/23	<p>Course Overview An Introduction to Sustainability</p> <ul style="list-style-type: none"> The Problem We Must Solve [Problems and Success Stories of Sustainable Development (SD).] Population and Limits to Growth 	Syllabus	None
2	1/30	<p>Developing Sustainable Solutions</p> <ul style="list-style-type: none"> From Environmentalism to Sustainability Emergency of Sustainability The Sustainable Development Goals Redefining Sustainability within a Scientific Framework Competing Theories of Sustainable Dev. Limits to Sustainability [Is Sustainability Still Possible?] 	<p>Chapter 1</p> <p>Development Knowledge Platform (Topics) https://sustainabledevelopment.un.org/topics</p> <p>Check Blackboard [BB]</p>	<p>Role Play Activity on Sustainable Development Goals [Country Representation]</p> <p><i>Referencing & assignment writing: In-text citations (In-class activity)</i></p>
3	2/6	<p>Integrating Sustainable Solutions at Different Levels of Organization</p> <ul style="list-style-type: none"> Geographic Perspectives and Sustainable Development The two-dimensions of SD [Time and Space] 	<p>Chapter 2 & 3</p> <p>The role of Spatial Scale in Sustainable Dev. [Article – BB]</p>	<p>Geographical Education and SD - In-class Activity</p> <p>Short Writing Assignment #1</p>
4	2/13	<p>Tools, Systems, and Innovation for Sustainability [Measuring Sustainability]</p> <ul style="list-style-type: none"> How we measure development Sustainable Development Players & Programs <p>Life Cycle Assessment</p> <ul style="list-style-type: none"> Overview of LCA Application of LCA 	<p>Integration of GIS into LCA, Measuring Sustainability (articles) – Check Blackboard</p>	<p>Product Development and the Environment – LCA Class Activity</p> <p>Take Home Quiz -1</p>
5	2/20	<p>Sustainable Communities, Cities and Regions</p> <ul style="list-style-type: none"> The Goals of Sustainable Communities Smart Growth, New Urbanism & Regional Sustainability Case Studies of Sustainable Cities [Curitiba, Amsterdam, Samsø Island, Denmark & Noto, Japan] Solving our Garbage Problems in the Cities 	<p>Chapter 6</p> <p>Case Studies</p> <p>Urban Sustainability Indicators and GIS</p> <p>Articles – Blackboard</p>	<p>Watch Video on Sustainable Cities and Discuss in Groups</p> <p>Short Writing Assignment #2</p>
6	2/27	First Exam [Green Scantron for GGS 307 and Blue-Book for GGS 507 Students]		
		<p>Sustainable Solutions: Food and Agriculture</p> <ul style="list-style-type: none"> The Evolution of Agricultural Systems Sustainable Farming: Different Places, Different Solutions The Green Revolution & Sustainability Food Diversity & Indigenous Crops Genetic Modification & Sustainability 	Chapter 8	<p>Guest Lecturer</p> <p><i>Group Formation for Final Project based on topics of interest [Instructor will provide topics]</i></p>

Week Date		Topic Description	Readings	Homework Activity Due date
7	3/5	Sustainable Solutions: Food and Agriculture <i>Cont....</i> <ul style="list-style-type: none"> Remote Sensing and GIS for Sustainable Agriculture 	Chapter 8 Article and GIS Data - Blackboard {BB}	Hands-on GIS and Agric. Take Home Quiz-2 <i>GGS 507-Research Topic Description</i>
8	3/12	Spring Recess [No Classes]		
9	3/19	The concept of Planetary Boundaries <ul style="list-style-type: none"> Living in the Anthropocene Exploring the Safe Operating Space for Humanity The Future of Nature 	Rockstrom et al., “Planetary Boundaries:” Will Steffan article on The Future of Nature - check [BB]	Short Writing Assignment #3
10	3/26	Climate and Renewable Technologies <ul style="list-style-type: none"> Climate Change: A Threat to Sustainable Development The Cause and the greenhouse effect Solutions: Technology and lifestyle Sustainable Energy Future: Renewable Technologies <ul style="list-style-type: none"> Barriers to Renewable Future Overcoming barriers to Sustainable Renewable Future 	Chapter 11	Simulation Activity on Climate Change Take Home Quiz-3
11	4/2	Sustainable Business Practices <ul style="list-style-type: none"> Corporate Social Responsibility Corporate governance Sustainable products and services 	Chapter 7	In-Class Discussion Short Writing Assignment #4
12	4/9	Second Exam [<i>Green Scantron for GGS 307 and Blue-Book for GGS 507 Students</i>]		
13	4/16	Future Perspectives: Developing Sustainable Development	Chapter 13	Final Discussion: Is Sustainability Still Possible? <i>GGS 507 – Draft for Peer Review [4/19]</i>
14	4/23	Final Research Presentation		
15	4/30	Final Research Presentation Final Exam Review		
16	5/3	Submit Final Research Paper [GGS 507-001] – through the Blackboard		
	5/7	Final Exam [GGS 307-001] – 4:30 – 7:10 pm		

The schedule presented below is subject to change at the discretion of the instructor. Every effort will be made to announce changes in advance; however, students are responsible for changes. Students should regularly check the course Blackboard account as information related to the class including schedule and assignment changes will be communicated there or through the GMU email.

The instructor has selected additional required readings that are placed under “Content” through the Blackboard [<https://mymasonportal.gmu.edu>].