

## Department of Geography & GeoInformation Science

### GGG 307-001/507-001 Sustainable Development | Spring 2018

#### Instructor Contact Details

Name : Maction Komwa, PhD  
Office : Exploratory Hall, Room 2210  
Email : [mkomwa@gmu.edu](mailto:mkomwa@gmu.edu)  
Phone : 703-993-5646

#### Course Details

Meeting Times : Wednesdays, 7:20 - 10:00 pm  
Location : Exploratory Hall 2103  
Office hours : Wednesdays, 5:00 – 6:30 pm  
Credits : 3.000

---

#### Teaching Assistant Details

Name: Piash Debnat                      Email: [pdebnat2@masonlive.gmu.edu](mailto:pdebnat2@masonlive.gmu.edu)  
Office:

#### Catalog description:

Sustainability lies at the intersection of the environment, society, and economics. A sustainable future requires professionals who are able to integrate sustainability into existing programs. A particular knowledge base and skill set is required to drive this kind of transformational change. 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.

#### 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:** Recommended Textbook: Sustainability: A Comprehensive Foundation by Tom Theis and Jonathan Tomkin, Editors.

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

## Teaching and Assessment

**GGG 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.

## Grading Policy

Your performance in the course will be evaluated from the following components:

GGG 3037		GGG 507	
Assessment	% (of final grade)	Assessment	% (of final grade)
Critical Response Paper	10%	Critical Response Paper	10%
Class Participation	5%	Class Participation	5%
Simulation Activity/Discussion	5%	Simulation Activity/ Discussion	5%
Short Practice Quizzes	3%	Short Practice Quizzes	3%
Research Topic Description	2%	Research Topic Description	2%
Midterm Exam	30%	Midterm Exam	30%
Final Exam	35%	Individual Presentation	10%
Group Presentation	10	Final Paper	35%
<b>Total</b>	<b>100</b>	<b>Total</b>	<b>100</b>

*All late submission will be downgraded to 5 points for each day.*

### Cut-off values for your final Letter Grade

**GGG 307:** A (93%) A- (90%) B+ (87%) B (83%) B- (80%) C+ (77%) C (70%) D (60%) F (<60%)  
**GGG 507:** A (93%) A- (90%) B+ (87%) B (83%) B- (80%) C+ (77%) C (70%) D (60%) F (<60%)

## Simulation Activities/Group Discussion

Additionally, there will be reading assignments from time to time derived from assigned articles that will be posted through the Blackboard. Each student or group of students will lead a discussion of any article that might be assigned by the Instructor (part of class participation grade). Students will identify key issues and subjects which they believe should be considered by the class in a conversation about sustainable development. The Forum Discussion Leaders will be required to:

- Succinctly synthesize the material with a brief opening oral presentation (including a set of slides highlighting the most important points from the article.
- Develop two or three questions intended to stimulate class discussion.

## Final Project

The final project is a unique opportunity for students to utilize and apply the concepts learned in class. Research topic may address a particular topic on sustainability of interest to you. Upon selecting your topic, you will write One-page description of your topic for instructor's approval. Details of the project will be discussed in class and posted through the Blackboard.

**GGG 307** students will complete the project in groups of three - four

**GGG 507** students – this will be an individual project.

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

### **Academic Integrity**

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>).

### **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.

### **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. Learning Services, University Career Services [<http://careers.gmu.edu/>]
- iii. The Writing Center [<http://writingcenter.gmu.edu/>] and other Learning Services within GMU.
- iv. University Catalog: <http://catalog.gmu.edu/> |
- v. University Policies: <http://universitypolicy.gmu.edu/>

### **Students with Disabilities**

George Mason welcomes students with disabilities into the University's educational programs. If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services (ODS) at 703-993-2474. All academic accommodations must be arranged through the ODS. All students with questions or concerns about this class are encouraged to set up a time to meet with the professor, preferably during the first two weeks of the semester. Disability Services (ODS) website: <http://ods.gmu.edu/> / Student Union Building I (SUB), 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](mailto:cde@gmu.edu).

## Tentative Schedule & Readings

Date	Topic description	Readings /Assignments
01/24	<b>Introductions and Course Overview</b> Sustainability Concepts The UN Sustainable Development Goals	None  Development Knowledge Platform (Topics) <a href="https://sustainabledevelopment.un.org/topics">https://sustainabledevelopment.un.org/topics</a>
01/31	<b>Introduction to Sustainability: Society &amp; the Environment</b> <ul style="list-style-type: none"> <li>• What is Sustainable Development?</li> <li>• The debate over Sustainable Futures, and the Earth Summits</li> <li>• The History of Sustainable Development (SD) [Timeline]</li> <li>• Challenges for Sustainability</li> </ul>	Check Blackboard —for additional Readings  <b>Read Chapter 1 of your textbook</b> Student’s Self-introduction (due) – Discussion Board
02/07	<b>Our Earth and the Sustainability Crisis &amp; Water Scarcity</b> <ul style="list-style-type: none"> <li>• The Tragedy of the Commons by James Hardin, 1968</li> <li>• Tragedy of the Commons, Business Growth and the Fundamental Sustainability Problem by Edward Garity, 2012</li> <li>• Limits to Growth</li> <li>• Water Scarcity - what does it mean for sustainable development?</li> </ul>	Critical Response Paper # 1  Check reading material through the Blackboard
02/14	<b>Pathways to Urban Sustainability</b> <ul style="list-style-type: none"> <li>• The Patterns of Urbanization Around the World</li> <li>• Sustainable Infrastructure/transportation</li> <li>• The Challenge of Urban Sustainability</li> <li>• Lessons from Sustainable Cities – The Case Study of Curitiba City, Brazil</li> </ul>	Check reading material through the Blackboard  <b>Read Chapter 11</b>  In-class Video on Sustainable City - Curitiba
02/21	<b>Sustainable Energy Systems</b> <ul style="list-style-type: none"> <li>• Introduction to Sustainable Energy Systems</li> <li>• Energy as the foundation of Human Economies</li> <li>• Energy: Choices for Environment and Development</li> <li>• Energy Conservation Measures</li> </ul>	<b>Read Chapter 8</b>  Critical Response Paper # 2
02/28	<b>Corporate Sustainability</b>	
	<ul style="list-style-type: none"> <li>• Corporations and Ecological Sustainability</li> <li>• Walmart as an example of corporate sustainability</li> </ul> <b>Mid-Term Exam Review</b>	Corporate Responsibility Report for Walmart, <a href="https://corporate.walmart.com/">https://corporate.walmart.com/</a> Critical Response Paper # 3 <b>Research Topic Description</b>
03/07	<b>Mid-Term Exam</b>	
03/14	<b>Spring Break</b>	
03/21	<b>Planetary boundaries</b> <ul style="list-style-type: none"> <li>• What are planetary boundaries for the Earth?</li> <li>• Approaching a Global Tipping Point for the Earth</li> <li>• Ecosystem &amp; Climate Change</li> </ul>	Rockstrom et al., “Planetary Boundaries: Exploring the Safe Operating Space for Humanity” Steffen, "How defining Planetary Boundaries can Transform our Approach to Growth”

<b>Date</b>	<b>Topic description</b>	<b>Readings /Assignments</b>
03/28	<b>Measuring Sustainability</b> <ul style="list-style-type: none"> <li>• How do we measure sustainability?</li> <li>• Sustainability Indicators</li> <li>• Metrics of Sustainability on GMU Campus</li> </ul>	Critical Response Paper # 4 <i>Read Chapter 9</i>   Additional Readings - check articles through the Blackboard
04/04	<b>Sustainability Assessment Tools</b> <ul style="list-style-type: none"> <li>• Life Cycle Assessment to Sustainable Production</li> <li>• The Challenges of Sustainable Supply Chain Management</li> </ul>	<b>Progress Report - Draft</b> <i>Read Chapter 9</i>   Additional Readings - check articles through the Blackboard
04/11	<b>UN Millennium Ecosystems   Sustainable Food Systems</b> <ul style="list-style-type: none"> <li>• United Nation, “Ecosystems and Human Well-being”</li> <li>• Sustainable Community Food Systems</li> </ul>	Critical Response Paper # 5 Check reading material through the Blackboard
04/18	<b>Presentation I</b>	
04/25	<b>Presentation II</b>	
05/02	<b>Presentation III</b>	
	<b>Future of Sustainability</b>	
	<b>Final Paper Due [Graduate Students]</b>	
<b>05/09</b>	<b>Final Exam [7:20 pm – 10:15 pm]</b>	

You should be referring to the course schedule and blackboard for specific readings, activities, assignments, and due dates. The course instructor reserves the right to make changes as necessary to the course content and office hours during the course of the term. If these changes are made they will be immediately notified to students through individual emails or the blackboard explaining the nature of the change(s).

*In-class discussion by the Discussion Leaders will be determined by the Instructor accordingly.*