

Department of Geography & GeoInformation Science

GGS 303-003: Geography of Resource Conservation

Fall 2018

Instructor Contact Details		Course Details	
Name	: Maction Komwa, PhD	Meeting Times	: MW 12:00 noon – 1:15 pm
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Required Textbook: Natural Resources Conservation; Management for a Sustainable Future (10th Edition).

Daniel D. Chiras, John P. Reganold

ISBN-13: 978-0132251389 ISBN-10: 0132251388 Edition: 10th

Available at the George Mason University (GMU) Bookstore or on Amazon

Prerequisites: At least 30 total credit hours, completion or concurrent enrollment in all university general education courses or permission of instructor.

Course description

Provides analysis of world resources distribution, conservation, and preservation; and problems resulting from their natural occurrence and utilization. Uses knowledge from physical and social sciences to develop complex and sophisticated understanding of issues surrounding natural resource exploitation and management, conservation, and preservation.

Course Overview

Conservation of Resources and Environment addresses the physical, environmental, economic, and human aspects of the availability and use of resources. The conservation and use of natural resources involves all aspects of problems resulting from their unequal distribution or unwise use. Humans exist in an interdependent world where technology and the natural resources must work in a supportive and balanced manner or both the environment and the human population will suffer. Humankind must find ways to make technology and the natural environment work synergistically in order to guarantee long-term sustainable development that does no permanent harm to our living space.

In order to address this major topic in a sophisticated and holistic manner a number of subjects must be included in the discussion. The way in which resources are used has a major impact on the quality of life (including health and safety); the economic well-being of all peoples of the world; the level and type of conflicts that occur among peoples and nations; and the long-term protection of the total ecosystem.

Learning Outcomes

As a GMU Synthesis course, this course will require students to synthesize the knowledge, skills and values gained from the Mason Core curriculum and expand each student's ability to master new content, think critically, and develop life-long learning skills across the physical and social sciences. Upon completing this synthesis course, students will achieve learning outcomes enabling them to:

1. Understand the importance of various natural resources and how they are managed at a local or global scale.
2. Understand a global distribution of the earth's resources.
3. Evaluate and analyze the impact of resource exploitation.

4. Understand the concepts of conservation planning and sustainability of human utilization of natural resources
5. Apply critical thinking skills to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources.
6. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

Course Evaluation

The following assignments and grading criteria will be used to determine your final grade:

Assessment description	% (of final grade)
Critical response papers	10
Quizzes	5
Discussion Leader(s)	5
Online Discussion	5
Midterm Exam	15
Final Exam	20
Final Group Presentation	15
Final Group Paper	25
Total	100

Grading Scale							
Grade	Percentage	Grade	Percentage	Grade	Percentage	Grade	Percentage
A+	98 -100%	B+	88 – 89%	C+	78 – 79%	F	below 60%
A	93 -97%	B	83 – 87%	C	70 – 77%		
A-	90 -92%	B-	80 – 82%	D	60 – 69%		

Assignments due dates – Written assignments will be due according to the dates shown in the syllabus. I do accept late work, but my policy is to deduct **5 points** for every day your assignment is **late**.

Critical response papers:

- Students will submit 6 Critical Response Papers over the course of the semester beginning end of week 2
- Copies should be posted at the very latest by the student on Blackboard by 11:59 pm of due date

You will be prompted to use critical thinking to create a comprehensive reflection piece detailing your understanding of the concepts discussed in class, class readings, your experience and what you learned from it (learning outcome) and how this relates to conservation of natural resources and environment.

Details of these assignments will be discussed in class and instructions will be uploaded through the Blackboard -- **ASSIGNMENTS** Folder.

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

No make-up Exams will be given without a valid reason that is supported by documented evidence.

Group Semester Project

A group will comprise three students who will make a final presentation about the geography and conservation of a natural resource topic as per class discussion. The project will consist of a series of assignments, which will be completed in your small groups. The details for the assignments are presented below:

- i. Ungraded one page or less description of a problematic topic of your group choice relevant to conservation and use of environmental resources. In your write-up identify a problem statement or research questions. Show why the problem is problematic. Motivate your readers to see the problem's importance. Details of the project will be discussed in class.
- ii. **Final Group Presentation.** Each group will present their term project relevant to conservation or environmental management subject of interest to you. The team will be given 20 minutes of PowerPoint presentation including Q&As.
- iii. **Group Final Written Paper.** This will be a written team project relevant to conservation or environmental management. Details of the group project will be given later during the semester.

Discussion Leaders & Class Participation

You will be evaluated on your participation in class during our discussions. I am expecting each to be actively engaged in the discussion process during each class. You cannot participate fully if you don't show up for classes. Class participation will be graded accordingly: answering questions as well as asking questions, bringing up points of interest for discussion either in class or through the Blackboard Discussion Forum. Such being the case it is very important that you do your reading assignments prior to our class meeting. Reading assignments of each chapter and assigned articles are very critical for you to succeed in this synthesis course. Details of Discussion Leaders will be given in class by the Instructor.

Classroom Expectations:

Students are expected to be on time for class. Regular attendance is strongly recommended.

1. 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.
2. 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.
3. For each hour of in-class time you should anticipate three hours to complete out-of-class work and preparation.
4. Cell Phones and pagers must be turned off during class. Zero tolerance!

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. Make sure you check the instructions through the Blackboard on how to write your term papers. If you have questions about when the contributions of others to your work must be acknowledged and appropriate ways to cite those contributions, please talk with the professor.

University Services

George Mason University has a number of 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. 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/>

Absences & Accommodations

Students are expected to attend all classes and to complete all assignments on time. Absences may have an adverse effect on grades in a course including failure.

Excused absences: In certain circumstances, absences may be excused. These include:

- **Absence for religious observances:** Students must notify their professors in writing at the beginning of the semester of religious observances that conflict with classes. Students who cannot be accommodated should discuss the matter with a dean.
- **Absence for athletic travel:** Student-athletes must provide their professors with a travel letter at the beginning of the semester which highlights potential absences. Students who cannot be accommodated for some or all absences should discuss the matter with the relevant Academic Coordinator for Student-Athletes.
- **Absence for documented illness:** Students who miss multiple classes due to prolonged illness should seek medical care and provide documentation of such to the Dean's Office, which will communicate with the student's professors. A prolonged absence may necessitate the student's withdrawal from the course or from the University for the semester.
- **At the discretion of the professor:** There may be cases where an absence is undocumented but is, nevertheless, excused by the professor (e.g., absence due to a death in the family). Students should initiate a conversation with their professors about the nature and duration of the absence, in advance of the absence whenever possible.

When absences are excused, students remain responsible for all assigned work, and shall be provided with the opportunity to make up, without penalty, any work that they have missed.

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: <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.

Course Outline/Schedule

You should be referring to the course schedule and blackboard for specific readings, activities, and assignments. 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.

Date	Topic Description	Reading Assignment
08/27	Introductions and Course Overview	
Chapter 1: Introduction to Natural Resource Conservation: Themes & Concepts		
08/29	Introduction: The Earth's natural resources and Resource Conservation Read Chapter 1 pg 1-4 The Scientific Method and Adaptive Management	
09/03	Labor Day – No Classes	
09/05	Natural Resource Conservation & Management: Past, Present & Future continued... History of the Resource Conservation, Environmental, and Sustainability Movements Natural Resources Classification	<i>Quiz 1</i> Chapter 1 – Pg 6-16
09/10	Role-plays and Class Debate on the State of Nature	Read article on The State of Nature by Carl Pope and Bjorn Lomborg
09/12	<i>Introduction to GIS and Remote Sensing</i> /	<i>Tools for Natural Resources Management</i> Page 17 Critical Response # 1
09/17	<i>GIS hands-on [GIS for Environmental Applications]</i>	
Chapter 2: Environmental economics and ethics		
09/19	Introduction to environmental & Natural Resources Economics	
09/24	Externalities and Policy Interventions Sustainable Economies	<i>Quiz 2 for chapter 2</i>
09/26	Common Property Resource Problems Problem-based learning Activity on ToC	Read “The Tragedy of the Commons” ToC – check Article through the BB Topic Description
Chapter 4: Human Population, Consumption, and Environment		
10/01	Historical trends in human population size & geographical distribution The U.S. Population Picture Demographic Transition Concept	Critical Response # 2 on the Tragedy of the Commons
10/03	Human Population Challenges & geographical variation in human consumption patterns	<i>Quiz 3</i>
10/08	Fall Break [No Classes – Monday Class meets on 10/9]	

Date	Topic Description	Reading Assignment
Chapter 10 & 11 – Water: Resources Management and Pollution		
10/09	Global Water Challenges & Kinds of Water Use	
10/10	Managing Water Resources Sustainably	
10/15	Water Pollution PBS Video: Poisoned Water	<i>Critical Response # 3</i>
10/17	Mid-Term Exam	
Chapter 14: Forest Conservation and Management		
10/22	Forest Ownership & The US Forest Service	
	Harvesting Trees and Reforestation GIS Application in Forestry	A Closer Look check 14.2 – 14.4
10/24	Preserving Wilderness	A Closer Look – Check 14.5 <i>Quiz 4</i>
Chapter 19: Global Warming & Climate Change		
10/29	Global Climate and Evidence for Present Climate Change	
10/31	Causes of Present Climate Change Climate Models and Forecast	<i>Quiz 5 Critical Response # 4</i>
11/05	Implications of climate change	
	<i>Class Group Simulation Activity on Climate Change</i>	Simulation Activity Handout
11/07	Marine Resources	
11/12	Simulation Activity – Plastic or planet?	<i>Progress Report on your Final Group Paper</i>
Chapter 23: Creating a Sustainable System of Energy		
11/14	Energy Conservation & Energy Efficiency	<i>Critical Response # 5 on Marine Resources Simulation Activity</i>
11/19	Energy Futures A Closer Look 23.1 – Solar Electricity Class Discussion	<i>Quiz 6</i>
11/21-25	Thanksgiving Recess [No Class Meeting]	
Biodiversity & Conservation Planning Chapter 15		
11/26	Overview - Plant and Animal Extinction	
11/28	Extinction: Ending the Earth's Biological Diversity	<i>Critical Response # 6</i>
12/03	Case Study 15.2: The Passenger Pigeon GIS and Remote Sensing: Mapping Nations Weeds with GIS	
12/05	<i>Group Presentation</i>	
12/10	<i>Reading Day</i>	
12/17	<i>Final Exam [10:30 – 1:15 pm]</i>	