



### Geography of Resource Conservation

GGs 303-B01: A synchronous online Summer course 2022

#### Contact Details for Your Instructor

#### Course Details

Name : Maction Komwa, PhD	Meeting Times :	MW   10: 30 am – 1:10 pm
Office : Exploratory Hall, Room 2414	Location:	Virtual Class Meetings [Zoom]
Email : <a href="mailto:mkomwa@gmu.edu">mkomwa@gmu.edu</a>	Credit hours :	3.00
Phone : 703-993-5646	Virtual Office Hours:	T   R (1:30 pm – 2:30 pm)

**Instructor’s Virtual Office hours:** All appointments for this semester are currently being conducted virtually either by phone listed above or through Zoom. A Zoom link for my office hours will be available through the Blackboard. Office hours are first come first served.

If you want to meet outside my virtual office hours, you can check my availability and make an appointment by sending me an email or through Mason Navigate link: <https://gmucampus.eab.com/>. Follow the instructions and choose “Faculty office hours” for the meeting type.

#### Course Description:

The course 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.

#### Required Textbooks:



Natural Resource Conservation: Management for a Sustainable Future. 10<sup>th</sup> Edition  
Daniel D Chiras Daniel Chiras John P Reganold John Reganold  
ISBN: 0132251388  
ISBN-13: 9780132251389

#### 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 involve 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 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.

Finally, throughout the semester, we will use and reflect the traditional use of geography, which integrates studies of physical and human phenomena to understand human use of the earth resources.

#### 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. Outline the scientific method and distinguish fact versus opinion regarding conservation and environmental issues.
3. Evaluate and analyze the impact of resource exploitation, conservation and preservation.
4. Evaluate the science behind global warming and atmospheric carbon dioxide levels.

5. Discuss and apply geospatial technology tools for conservation management and planning.
6. Apply critical thinking skills and quantitative reasoning to evaluate the quality, credibility and limitations of an argument or a solution using appropriate evidence or resources.
7. Communicate effectively in both oral and written forms, applying appropriate rhetorical standards (e.g., audience adaptation, language, argument, organization, evidence, etc.)

## Instructional Methodology

This is a synchronous online course that is fully online organized around scheduled meeting days and times as listed on the Patriot schedule of classes. All students will be required to join class sessions remotely and in real time utilizing video conferencing technologies such as Zoom or Blackboard (Bb) Collaborate, which will be made available through the Bb.

Our lecture and active learning sessions or portions of the class will be highly interactive so your participation is essential. In addition, these synchronous sessions will be recorded to facilitate access in case you miss a class or have made an excused from attending a class session. The Zoom recording feature for all students will be disabled so that no one else will be able to record lecture sessions through Zoom. Recording by other means is not permitted. If for some reasons, you have some concerns about being recorded during these sessions, please email me so that we can find a common ground and assist so you can still participate in the course without your video on. You will log-in using your mason account, and if you prefer use of pseudonym instead of your name, please let me know what pseudonym you will be using so that I can easily identify you during our class lectures, discussion, etc.

This summer course just like any other summer classes is somehow intensive (good news - we will have 8 weeks compared to 5 weeks for other summer classes), so you will be expected to dedicate additional time approx. 4 -5 hours per week outside of class to review course learning activities such as: viewing video, reading assigned materials, completing homework assignments, actively participating in online discussion forum, etc.

We will offer online review sessions one week prior to each scheduled exam (Exam I and II). There is **NO Final Exam** since you will work on your Research Project. All Exams will be administered through the Blackboard. You will be required to use LockDown Browser only without a Video camera ON. Instructions on how to install Respondus LockDown browser will be made through the Blackboard or use the link below: <https://its.gmu.edu/knowledge-base/how-to-install-and-use-the-respondus-lockdown-browser/>

Each scheduled test will be made available before the due date and students will be required to complete the Exam within 72 hours after the test is made available to students.

**Note:** To the best interest of this class - it is not appropriate for students to join an online synchronous class session while on public transportation, at work, or in a crowded off-campus environment. This could be detrimental to learning and disruptive to the class itself.

- **Synchronous, Real-time instruction: Mondays | Wednesdays** 10:30 am – 1:10 pm, Virtual classroom meetings through Zoom Videoconference. The most common tools that we will use in our virtual classroom are: videoconferencing, screen sharing, online whiteboard for real-time collaboration, chat tool, and breakout rooms.
- **Family members are not invited to the online classroom. Please, be mindful of one another's privacy.**

## Technology Requirements

- As a student participating in this traditional-hybrid course, or considering taking this type of course, it is expected that you have the following:
  - Internet Connection
    - Access to high speed connection such as Cable, DSL, or Satellite is recommended
    - Internet Browser Support include:
      - Internet Explorer latest version | Safari version latest version
      - Google Chrome latest version | Firefox latest version
  - Access to software
    - You will need to have access to the most up to date:
      - Adobe Acrobat Reader. <https://get.adobe.com/reader/>;

- Windows Media Player:  
<https://windows.microsoft.com/enus/windows/downloads/windows-media-player/>
  - Apple Quick Time Player: [www.apple.com/quicktime/download/](http://www.apple.com/quicktime/download/)
  - MS Word, Excel, etc.
- Required equipment necessary for this course thus including hardware and software (e.g. MS word, etc.), speakers, microphones, or webcams, etc. are the responsibility of the student.

### Learning Management Systems

- Blackboard is our course management system which provides access to course materials, assignments, and class discussions. You will log in to Blackboard using your George Mason username and password through this link: <https://mymasonportal.gmu.edu>.
- If you have computer problems, please contact ITS Support Center - <http://itservices.gmu.edu>; Email: [support@gmu.edu](mailto:support@gmu.edu); | Phone: 703-993-8870.

### Course Assignments and Grading Breakdown

As your Instructor to this course, I am fully committed to ensure that the assessment of your learning in this course is fair and equitable. Do not hesitate to contact me if you find it hard to balance school activities, work and family issues. I will be more than willing to accommodate your needs, so please keep me in the loop. Students are expected to submit high quality assignments during this course via the Blackboard. All assignments are to be completed according to the dates outlined in the syllabus.

Course Assignment (s)	Percentage (%)
Discussion Forum (4)	5%
Debate/Simulation Participation /Article Review	5 %
GIS Lab Assignments (3)	15%
One Exam	25%
Research Project <ul style="list-style-type: none"> <li>• Topic description</li> <li>• Annotated Bibliography</li> <li>• Synthesis of Literature Review</li> <li>• Draft</li> <li>• Final Research Paper</li> </ul>	No Grade - 2% - 3% - 5% - 30%
Presentation	10%

Grades will be assigned based on the distribution scheme below.

Range	Letter Grade	Grade description	Range	Letter Grade	Grade description
93 - 100	A	Excellent	77 - 79	C+	Satisfactory
90 - 92	A-	Very Good	70 - 76	C	Satisfactory
87 - 89	B+	Good with merit	60 - 69	D	Just OK
83 - 86	B	Good	<60	F	Failure
80 - 82	B-	Above satisfactory			

### Late/Make-up Assignments Policy

- Due dates for all assignments are provided in the course schedule as well as the Blackboard. Unless otherwise specified all assignments are due on those dates. It is the responsibility of the student to ensure that the assignments are submitted by the established due date.
- Assignments turned in **within seven (5) days will result in a 25% deduction** for the assignment. Assignments **later that seven (5) days will result in a 50% deduction** for the assignment.
- Technical excuses ("computer system error", "didn't submit correctly on Blackboard", etc.) will not be accepted as reasons for late work.
- In some subjects/assignments no late assignments will be accepted for credit. Such assignments include discussion forum and end of chapter quiz.
- No make-up Exams or extensions on assignments will be given without a valid reason that is supported by

documented evidence.

- Work is NOT accepted via e-mail, unless the instructions specifically say otherwise. Submit your work through the Blackboard accordingly.
- Please do not wait until the last minute (11:59 pm – Eastern Time) for you to complete your assignment - computers are machines and sometimes they cannot be reliable (e.g. power outage, wireless connection problem etc.) and cannot be held accountable for your excuse.

### **Exam**

There will be Only one Exam. The exam will be mostly objective in nature with questions that will allow students to analyze, apply, and synthesize lecture, videos and homework concepts and reading material. Exam may include multiple-choice, matching, fill-in the blank, and short answer questions. You will be given a window of 4 days to take the exam [Thursday – Sunday – 11:59 pm] on July 17.

### **Discussion Forums (4)**

Class discussion is an important part of any college experience. You will have a structured opportunity to interact with each other through guided questions related to class topics. Post your initial topic-related and thought-provoking comments that foster interaction and discussion. This will demonstrate your class participation as a whole including each week's assigned readings. Your postings will be evaluated according to the scientific content, critical thinking and concept application based on the following criteria:

- *Unacceptable (0 points); poor (1 point); good (3 points) and excellent (5 points). For a full rubric, check the Blackboard.*
- *Each Discussion topic will have instructions on how to write and submit the posting and your response. Absolutely, no make-up will be given for Discussion Forum.*

### **Research Project (1)**

Our virtual class lectures/discussion will cover so many topics on geography of resource conservation. You will demonstrate your ability to understand, relate to what has been learnt, as well as receive critical peer feedback through a research paper. Through this platform, you will assemble different views, evidence and facts about a resource conservation and environmental topic from peer-reviewed articles, interviews, books and then critically interpret the synthesized information in your own writing. Evaluation of this paper will depend heavily on the depth of your research and ability to link class concepts to real-world issues on conservation and environment operations. More details or steps for writing this research paper including grade rubric will be posted through the Blackboard. A quick snapshot of requirements of the research paper is provided below:

The term project will be completed individually or in a group of two (if you prefer that way please let me know)

- *Individual project* should be a minimum of 8 or so pages long (***excluding title page and references***).
- *Group Project* should be a minimum of 15 pages or so pages long (***excluding title page and references***).
- Each member should put equal amount effort and writing.
- *Note* the page guidelines are approximate (APA format and 12pt format and double spacing).
- A minimum of 10 peer-reviewed articles/citation
- Previous sample term research paper topics and issues will be posted through the blackboard.

### **Reading Reflections Assignment /Simulation/Debate Participation**

The homework reading reflections assignment are designed for students to summarize the content of the reading or the main arguments (understand), to describe what is new or interesting (analyze, evaluate, create), and to identify those parts of the reading that are confusing (analyze, evaluate). Additionally, these assignments will help you develop your skills of self-assessment, and to reflect more deeply on the content of your reading assignments. Six questions on the reading reflection assignment are designed to link new concepts with some of the things you already know will be given. These questions these questions will give you an opportunity to reflect on and carefully think about what you are reading. Your writing will not be in a form of an essay but you will be required to write clearly in a logical way.

### **GIS Lab Assignments (3)**

Solutions to environmental problems and conservation of natural resources are many. In this course you will have the opportunity to learn some technological solutions that are of increasing value and used in many areas of resource management such as geographic information systems (GIS) and basic remote sensing. You will complete projects that are representative of geospatial applications. You will then apply these geospatial tools to better manage and plan the natural resources and environment. Each of these assignments will be discussed

in our virtual class meetings and you will be given instructions on how to complete the assignment. You will learn how to use GIS Software!

### **A “Life Happens Pass”**

You will be given a “Life Happens Pass” for only 1 written assignment with no penalty. This kind of arrangement is due to the unprecedented period that everyone is going through. Therefore, an automatic 72-hour extension will be given as long as you inform your instructor in writing.

### **Incompletes (IN) Grades**

Incomplete (IN) grades will be assigned only in cases of compelling and documented need, in accordance with policies set forth in the University Catalog. For details regarding incomplete grades, please visit Undergraduate Academic Affairs through this website: <https://chssundergrad.gmu.edu/other-forms/incompletes>

### **Student Responsibilities and Ground Rules for a Safe Learning Environment**

- Review the course material and follow the course calendar.
- During online classroom participation remove yourself from other distractions
- Work at full pace to avoid missing class activities.
- Debate the concepts that will be discussed in class not the person.
- Be active participants in discussion forum throughout the course period.
- Respect the privacy of other classmates and the instructor in this virtual classroom.
- Re-read your responses in the discussion forum carefully before postings them.
- Express differences of opinion in a polite and sensible way.
- Keep an open mind to the constructive criticism from classmates and use it to improve your work.
  - We are in this class to share information and learning from each other.
  - By sharing and discussing each other’s ideas, you will be able to examine your own thoughts and feelings hence, making the course interesting and enjoyable!
- Use good grammar and spelling in all your assignments and discussions.
- Write your messages in formal language.
- Be willing to work together

### **Course Communication & Privacy**

- Students are required to regularly check their MasonLive email account /Blackboard for announcements or updates related to the course.
- Students must use their MasonLive email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address.
- You should feel free to send me email if you have any questions regarding something that you do not understand. Although I will not instantly answer your e-mail, I will reply to your e-mail within 24-48 hours and if you don’t get my response please feel free to remind me or ask to confirm if I have received your email.
- Please do not wait until the day of the work is due to ask questions.
- Be careful when using acronyms. If used please spell out its meaning first.
- Avoid using slang terms – they can be misunderstood or misinterpreted.
- Refrain from using all CAPS when sending emails. This can be considered as shouting or being aggressive and even being stressful on the eye to the reader.
- Use good grammar and spelling in written communications.

**Academic integrity:** *The following statement is adapted from the Stearns Center for Teaching and Learning.* No grade is important enough to justify academic misconduct. The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code, which you can read fully at the Office for Academic Integrity (<https://oai.gmu.edu/mason-honor-code/>). The Honor Code Pledge 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 for this Honor Code: Student Members of the George Mason University community pledge

not to cheat, plagiarize, steal, or lie in matters related to academic work.

The Mason Honor Code defines cheating, plagiarism, stealing, and lying. It is expected that you understand these definitions. If you have any doubts about what constitutes cheating, plagiarism, stealing, or lying in the academic context, please see your professor. **Acts of academic dishonesty in this course may be penalized with failure of either the work in question or the entire course.**

### **Disability Accommodations**

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: [ods@gmu.edu](mailto:ods@gmu.edu) | Phone: (703) 993-2474.

### **Diversity and Inclusion**

George Mason University is committed to providing equal opportunity and an educational and work environment free from any discrimination on the basis of gender expression and identity, race, economic status, sex, sexuality, ethnicity, national origin, first language, religion, age and ability, marital status, pregnancy status, or genetic information. George Mason University shall adhere to all applicable state and federal equal opportunity/affirmative action statutes and regulations.

### **Sexual Harassment, Sexual Misconduct, and Interpersonal Violence**

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).

### **Student Privacy**

George Mason University strives to fully comply with FERPA by protecting the privacy of student records and judiciously evaluating requests for release of information from those records. Please see George Mason University’s student privacy policy <https://registrar.gmu.edu/students/privacy>.

### **Recording and/or sharing class materials**

Some kinds of participation in online study sites violate the Mason Honor code: these include accessing exam or quiz questions for this class; accessing exam, quiz, or assignment answers for this class; uploading of any of the instructor’s materials or exams; and uploading any of your own answers or finished work. Always consult your syllabus and your professor before using these sites. As a faculty member who will spend a lot of time creating course material for classroom use, unauthorized sharing of any of my course materials outside the class would violate important ethical standards.

### **Undergraduate Course Repetition**

Beginning fall 2018, there is a limit of three graded attempts for this course. A “W” does not count as a graded attempt. Please see AP. 1.3.4 in the University Catalog and consult with your academic advisor if you have any questions.

### **Student Support 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/>
- iv. University Catalog: <http://catalog.gmu.edu/>
- v. University Policies: <http://universitypolicy.gmu.edu>

## Absences & Accommodations

- **Religious Holidays:** Please refer to George Mason University's calendar of religious holidays and observations (<http://ulife.gmu.edu/calendar/religious-holiday-calendar/>). It is the student's responsibility to speak to the instructor in advance should their religious observances impact their participation in class activities and assignments.
- **Absence for documented illness:** Students who miss multiple virtual 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 professor(s). 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.

### Important dates to Remember:

- Last Day to Drop 50% Liability – June 15
- Unrestricted Withdrawal Period - June 16 – June 23
- Juneteenth Observance (University Closed) – June 20
- Independence Day (University Closed) – July 4
- **Exam – July 17**
- Last Day of Class – July 27

## Tentative Course Schedule

Week	Date	Topic Description	Textbook Chapters & Supplemental Readings	Homework   Activity Due date & Time (Time is consistent - 11:59 pm)
0	5/29 -6/6	Self-Introduction	Syllabus	Self-introduction due Sunday, <b>11:59 pm – June 4 Read the Syllabus</b>
1	6/8	Course Overview and Introduction <b>Introduction to Natural Resource Conservation</b> <ol style="list-style-type: none"> <li>1. A crisis on Planet Earth</li> <li>2. Views of Natural Resource Management</li> </ol>	<b>Chapter 1</b> Case Study: 1.1 The Earth Summit and Beyond	<b>Discussion #1:</b> - <b>Initial Post due Thursday</b> - <b>Comments due Saturday 11:59 pm</b>
2	6/13	<ol style="list-style-type: none"> <li>1. The State of Nature</li> <li>2. Historical and Current Conservation</li> <li>3. Classification of Natural Resources</li> <li>4. The Tragedy of the Commons</li> <li>5. Geospatial Technology Tools for Resource Management</li> <li>6. Introduction to ArcGIS Pro (Hands-on GIS Activity)</li> </ol>	Textbook: <b>Chapter 1</b> Additional Readings: The State of Nature: <a href="https://foreignpolicy.com/2009/10/22/debate-the-state-of-nature/">https://foreignpolicy.com/2009/10/22/debate-the-state-of-nature/</a> The Tragedy of the Commons <a href="https://science.sciencemag.org/content/162/3859/1243">https://science.sciencemag.org/content/162/3859/1243</a>	Reading Reflection on the State of Nature – before class meeting 6/13 Debate Participation - due 6/15 <b>Introduction to ArcGIS Pro #1– due 6/19</b> <i>Topic description for approval – due 6/19</i>
	6/15	<b>Class Debate</b> on The State of Nature: <b>Simulation #1:</b> Property Rights & the Tragedy of the Commons: - Fishing Game	The State of Nature: <a href="https://foreignpolicy.com/2009/10/22/debate-the-state-of-nature/">https://foreignpolicy.com/2009/10/22/debate-the-state-of-nature/</a> The Tragedy of the Commons <a href="https://science.sciencemag.org/content/162/3859/1243">https://science.sciencemag.org/content/162/3859/1243</a>	
	6/20	Juneteenth Observance (University Closed) – No Classes		
3	6/22	<b>Introduction to Resource Economics &amp; Ethics</b> <ul style="list-style-type: none"> <li>• The Economics of Natural Resource Systems</li> <li>• Externalities, Market Failure, and Policy Interventions</li> <li>• Introduction to Environmental Ethics and Justice</li> <li>• Cost-Benefit Analysis</li> </ul>	<b>Textbook: Chapter 2</b>	<b>Discussion #2:</b> - <b>Initial Post due Thursday</b> - <b>Comments due Saturday 11:59 pm</b> Annotated Bibliography [Minimum 6] – due 6/26
4	6/27	<b>Human Population Challenges [Recorded Lecture]</b> <ul style="list-style-type: none"> <li>• Understanding Populations and Population Growth</li> <li>• Population data, distribution, and Composition</li> <li>• Demographic Transition</li> <li>• Impact of Overpopulation and Environment</li> </ul>	Complete Assigned Reading Materials  <b>Textbook: Chapter 4</b>	<b>Mapping Census Data #2– due 7/1</b>
	6/29	<b>Application of GIS for Population Analysis</b> <ul style="list-style-type: none"> <li>• Population Measures, &amp; Tool: GIS &amp; Mapping [This will be recorded in advance]</li> </ul>	Pre-recorded Lecture on GIS Application on Population data. Students will use the concept to complete GIS Assignment on Mapping Census Data	



Week	Date	Topic Description	Textbook Chapters & Supplemental Readings	Homework   Activity Due date & Time (Time is consistent - 11:59 pm)
4	6/29	Search for literature [GMU Library; Google Scholar, etc.]	Use sources from <a href="https://library.gmu.edu/catalogs">https://library.gmu.edu/catalogs</a>	Synthesis of Literature Review – due 7/3
	7/4	Independence Day (University Closed) – July 4 – No Classes		
5	7/6	<b>Finish Forest Management</b> <ul style="list-style-type: none"> <li>• Forest Ownership &amp; The US Forest Service</li> <li>• Forest Harvesting Methods</li> <li>• Deforestation and Reforestation</li> <li>• Use of geospatial Technologies (Remote Sensing) to determine deforestation in the Amazon</li> <li>• Forest Management &amp; GIS Application (Hands-on Activity)</li> </ul> <b>Exam Review</b>	Textbook: <b>Chapter 14</b>	<b>Discussion #3:</b> <ul style="list-style-type: none"> <li>- <b>Initial Post due Thursday</b></li> <li>- <b>Comments due Saturday 11:59 pm</b></li> </ul> Draft Research Paper -due 7/10
6	7/11	<b>Global Warming &amp; Climate Change</b> <ul style="list-style-type: none"> <li>• Natural Factors that Influence Global Warming</li> <li>• Projected Impacts of Global Warming</li> <li>• Mitigation of Global Warming</li> </ul> <b>Simulation Activity on UN Climate Change</b>	Textbook: <b>Chapter 19</b>	<b>Exam – July 17</b>  Simulation Activity Summary on Climate Change -7/15
	7/13	<b>Managing Water Resources Sustainably</b> <ul style="list-style-type: none"> <li>• The Water Cycle</li> <li>• Water shortages: Issues and Solutions</li> </ul>	Textbook: <b>Chapter 10</b>	
		<b>Water Pollution</b> <ul style="list-style-type: none"> <li>• Types of Water Pollution</li> <li>• Major Pollutants, Prevention, and Control</li> <li>• Legislating Water Pollution</li> <li>• Pollution of the Oceans Plant and</li> </ul>	Textbook: <b>Chapter 11</b>  Case Study of the Chesapeake Bay – Poisoned Water Video	
7	7/18	<b>Plant and Animal Extinction</b> <ul style="list-style-type: none"> <li>• Extinction: Eroding the Earth’s Biological Extinction</li> <li>• Causes of Extinction &amp; Methods of Preventing Extinction</li> <li>• Endangered Species Act</li> <li>• Mapping Invasive Species with GIS – Hands</li> </ul>	Textbook: <b>Chapter 15</b>  Mapping Invasive Species with GIS – [In-class Activity]	Reading Reflection on Extinction – due 7/18 before class meeting  <b>Discussion #4:</b> <ul style="list-style-type: none"> <li>- <b>Initial Post due Thursday</b></li> <li>- <b>Comments due Saturday 11:59 pm</b></li> </ul>
	7/20	<b>World Hunger: Solving the Problem Sustainably</b> <ul style="list-style-type: none"> <li>• World Hunger: Dimensions of the Problem</li> <li>• Increasing Food Supplies Sustainably</li> <li>• Preparation/Tips for Final Presentation &amp; Research Paper</li> <li>• Final Talk: The Transition to a Global Sustainable Society</li> </ul>	Textbook: <b>Chapter 5</b>	<b>Geospatial Analysis of Deforestation in the Amazon Rain Forest #3</b>
8	7/25	Final Presentation [All Groups]		
	7/27	Students Finalize Research Papers		
		<b>Final Research Paper – due 7/29</b>		

The instructor reserves the right to make changes to this syllabus at any time and any changes made will be communicated to the students through the Blackboard