



## 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. Learn how to analyze and quantitatively evaluate the significance of resource patterns and trends.
3. Develop a question or problem and investigate the issues, sources and evidence e.g. water crisis, conservation planning, or global distribution of the earth's resources.
4. Evaluate and analyze the impact of resource exploitation.
5. Utilize synthesized solution to understand the concepts of conservation planning and sustainability of human utilization of natural resources.
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.)

## Assignments and Grading

All students are expected to turn-in all their assignments including exams as specified in this syllabus.

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

Short Writing Assignments [Combination of article summaries, critical thinking application, persuasive, argumentative, and reflection] x 5 [15%]

Quizzes x 4 [5%]

Participation [Discussions, In-class Activities] [5%]

Exam 1 [10%] – Feb 20

Exam 2 [10%] – March 24

Final Exam [15%] – May 7

Final Group Project [Full details of the Project will be discussed in class and guidelines will be posted through the Blackboard

- Topic description [1%] – Feb 25
- Research Proposal Description [5%] – March 17
- Presentation [10%]
- Research Paper [25%]

## 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%		

### 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 vent 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.
4. Taking good notes in class
6. Turning in all the assignments on time. All short-written assignments will be due by 11:59 pm on specific dates given through the Blackboard. *Late submission will be penalized according to the syllabus.*
7. 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.
8. You should submit your own work in all your written assignments unless otherwise stated like in group activities or group project.
9. 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](http://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](http://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](http://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](http://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](http://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](mailto: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!

---

## Course schedule/calendar

Week   Date		Topic Description	Textbook Chapters & Supplemental Readings	Homework  Activity Due date
1	1/21	Course Overview and Introduction	Syllabus	General Introduction
	1/23	Introduction to Natural Resource Conservation	Chapter 1	-
2	1/28	Historical and Current Conservation	Chapter 1	<i>Referencing &amp; assignment writing: In-text citations (In-class activity)</i>
	1/30	Views of Natural Resource Management   Understanding the Land Ethic	The State of Nature article [BB]   Land Ethic – Aldo	Carl & Lomborg – Debate
3	2/4	Conservation Planning using GIS Application	Chapter 1	In-class GIS activity on Conservation
	2/6	Introduction to Resource Economics & Ethics	Chapter 2	2.1 Ethics vs Economics <i>[Article Summary]</i>
4	2/11	Tragedy of the Commons (ToC) and Common-Pool-Resource (CPR) Theory	ToC, Hardin, 1968 article and the Nature of CPR Problems – Ostrom	Role Play and Prisoner's Dilemma Activity
	2/13	Externalities, Market Failures and Policy Interventions	Chapter 2	<i>Critical Thinking Qs [Short Writing Assignment]</i>
5	2/18	Determining Resource Value   Cost-Benefit Analysis	Chapter 2   Cost-effectiveness of conservation	Cost-Benefit Analysis in-class Activity
	2/20	<b>First Exam [Chapters 1 &amp; 2] – Green Scantron</b>		
6	2/25	Understanding Populations and Population Growth   Demographic Transition	Chapter 4	<i>[Research Topic]</i>
	2/27	Population data, distribution and Composition	Chapter 4	<i>Critical Thinking Qs</i>
7	3/3	Population Measures, & Tool: GIS & Mapping	Chapter 4 [GIS Data – BB]	Mapping – Population data
	3/5	Forest Management	Chapter 14	<i>[Short Writing Assignment]</i>
8	3/10 & 12	<b>Spring Recess [No classes]</b>		
9	3/17	Deforestation and Reforestation: The Amazon, Siberian, and the US Forestland Case Studies	Chapter 14  Rates and patterns of change – check	<i>Critical Thinking Qs [Research Project Proposal]</i>
	3/19	Land-cover data for conservation planning	Land-cover Mapping article [BB]	Land-cover mapping and Remote Sensing – Hands-on
10	3/24	<b>Second Exam [Chapters 4 &amp; 14] - Green Scantron</b>		
	3/26	Managing Water Resources Sustainably Spatial variation in surface supply	Chapter 10   GIS Data [BB]	<i>[Short Writing Assignment]</i>
11	3/31	Water Quality [Pollution Sources and Control]	Chapter 11	<i>Critical Thinking Qs</i>
	4/2	Global Warming & Climate Change <ul style="list-style-type: none"> <li>• Ecosystem Linkages, Impacts and vulnerability</li> </ul>	Chapter 19	-

Week   Date		Topic Description	Textbook Chapters & Supplemental Readings	Homework  Activity Due date
12	4/7	Simulation Activity on Climate Change	Hand-out [Check BB]	Conference Room -3 <sup>rd</sup> Floor
	4/9	Research Project – Outside Classroom	[Brainstorm ideas for Final	Fenwick Library
13	4/14	Creating a Sustainable System of Energy	Chapter 23	<i>[Short Writing Assignment]</i>
	4/16	Renewable Energy Sources   Biodiversity & Habitat	Chapter 23   Chapter 15	<i>Critical Thinking Questions</i>
14	4/21	Biodiversity & Habitat	Chapter 15   GIS Data [BB]	Mapping of habitat cores
	4/23	Final Group Presentation		
15	4/28	Final Group Presentation		
	4/30	Final Group Presentation   Final Exam Revision		
16	5/3	Submit Group Research Paper		
	5/5	Reading Day		
	5/7	<b>Final Exam [10:30 am – 1:15 pm] – Green Scantron</b>		

*“This syllabus, like any other courses you have taken, should be perceived as an evolving experience, and from time to time changes might become necessary. As instructor, I reserve the right to modify this syllabus, with the condition that those changes will be communicated to the entire class clearly and in writing.”*