

**GEOG 1115 / NR 1115: SEEKING SUSTAINABILITY**  
**Strategies to Examine, Understand, Change, and Save the World**

**COURSE INFORMATION**

Credit Hours: 3  
Requirements: None  
Primary Audience: All students are welcome.  
Prerequisites: No prerequisites are required for this course  
Location: New Classroom Building 120  
Meeting Times: 9:30pm-10:45pm T, Th

**INSTRUCTOR CONTACT INFORMATION**

Name: Dr. Timothy Baird  
Office Location: Major Williams Hall, Room 127  
Office Hours: Tuesdays and Thursdays 3pm-4pm, or by appointment

Email address: [tbaird@vt.edu](mailto:tbaird@vt.edu) (THIS IS THE BEST WAY TO GET IN TOUCH WITH ME - please put 'GEOG1115' in the Subject line of your email – this way it won't get lost)

**TEACHING ASSISTANT CONTACT INFORMATION**

Name: Mark Villarreal  
Office Location: Major Williams Hall, Room 112  
Office Hours: By appointment

Email address: [villarmd@vt.edu](mailto:villarmd@vt.edu) (CONTACT MARK WITH YOUR QUESTIONS ABOUT READING AND READING NOTES)

**COURSE DESCRIPTION & GOALS**

Sustaining the world's interconnected environmental, social, and economic systems is arguably the most pressing concern that humans now face. All sectors of our economies and all aspects of our lives are engaged in a grand struggle with the environment and yet "Sustainability" is still quite a mysterious enterprise. In the first semester of this two-semester course we will critically and constructively examine "Sustainability." We begin by examining the apparent goals of the sustainability movement and as well as the challenges it faces. Next, we will learn about the basic components (i.e., things) that "sustainability" is trying to sustain, how these things have evolved, and how they are interrelated. We will discuss strategies to understand integration and adaptation, including the strengths and weaknesses of diversity and how "sustain" really means "change". Finally, we will apply these perspectives to engage the current discussions surrounding global climate change and the global economic crisis.

Lastly, this course seeks to broaden our conceptualizations of what sustainability is (and more importantly, what it could be) within the context the most relevant issues facing humans today. We will discuss the relevance of language, food, energy, family, business, biodiversity, and design for sustainability and evaluate the prospect that the sustainability heavyweights who will do the ground-breaking stuff are still taking college classes.

By the end of the course, students should be able to:

- (1) **identify** key concepts of the social sciences;
- (2) **describe** the dominant interconnections within and between environmental, social, economic, and integrated complex adaptive systems;
- (3) **identify** interconnections among and differences between components and interactions within and across systems, including interconnections between social institutions, groups, and individuals;
- (4) **analyze** the ways in which values and beliefs relate to human behavior;
- (5) **identify** advantages and challenges of diversity across a range of contexts;
- (6) **interpret** an intercultural experience both from one's own and another's worldview; and
- (7) **create** and support arguments related to pressing sustainability challenges

Also, I think becoming a peace-loving trouble-maker would be positive outcome.

## **COURSE MATERIALS**

No Required Text

## **INSTRUCTIONAL METHODS**

Class periods will involve discussion of readings, small in-class group projects, and interactive lecture. Also, there will be a few short movies shown during the course.

## **READING & CLASS PARTICIPATION**

For this course, reading and class participation are inextricably related.

One of the primary forms of participation will be discussion. To reinforce this course objective, guiding questions will be provided for each reading. These questions will form the basis of our in-class discussion. Students are expected to do the required reading and answer the reading questions before the appropriate class period. Questions **should be uploaded to Scholar in advance of class** and are evaluated on a 100-point scale. Students are expected to make an earnest effort to respond thoughtfully to each question. Evaluation is not based on correct answers. Answers do not need to be long – a few sentences will suffice for full credit. 11 points will be deducted for each day that questions are handed in late. Exceptions will be made only in extreme circumstances. This is not intended to be punitive, but to encourage timely completion of the reading and quality preparation for class discussion.

In order to create a good climate for everyone to participate, please follow these discussion guidelines:

- *Be ready to share and explain your opinions. Feel free to disagree with others, but be specific in your own assertions and back them up with evidence.*
- *Listen carefully and respond to other members of the group. Be willing to change your mind when someone demonstrates an error in your logic or use of facts.*
- *Do not hesitate to ask for clarification of any point or term that you do not understand.*
- *Make your point succinctly, avoid repetition, and stick to the subject.*

The reading for this course will include newspaper, magazine, and journal articles, selections from books, and textbooks. It is important that you do the readings before the appropriate class periods. Plan ahead so that we will not get behind. PDFs of readings or links to sources on the internet can be found at [scholar.vt.edu](http://scholar.vt.edu). Also links to internet readings are provided on the syllabus.

## **COURSE EVALUATION**

The best evaluation is personal. “Did I learn anything in this class? Was it worth the effort?” An inquiring attitude and an active imagination will help you to recognize the relevance of the course topics to your life and will enhance your enjoyment of, and success in, this class.

Instructor evaluation will reflect performance on:

Reading Questions:	50%
Midterm Exam	23%
Final Exam	27%
<b>Final Grade</b>	<b>100%</b>

Reading Notes: please see *READING & CLASS PARTICIPATION* section above.

Exams: Exams will aim to evaluate critical thinking skills. Questions for the midterm and final will be drawn from the class discussions and reading notes. Exams will be open book and open notes. This does not mean that the exams will be easier – it means that I will be looking for thoughtful application of examples and ideas from the course to address broad conservation issues and challenges in an organized and convincing manner. One more thing – you have to be in a group of 3 or 4. It sucks – I know.

### **GENERAL EDUCATION - PATHWAYS ASSESSMENT GOALS & PLAN**

And another thing: This course is part of the incoming general education (GenEd) curriculum at Virginia Tech. GenEd programs are meant to promote broad learning across disciplines. This is meant to compliment deep disciplinary learning (e.g., majors). At Virginia Tech, this new curriculum, which is called Pathways, will replace the existing GenEd model, called the Curriculum for Liberal Education (CLE). In an effort to track the efficacy of the Pathways curriculum, all approved GenEd courses will focus on specific learning outcomes (e.g., scientific reasoning, critique and practice in arts and design, etc.) and indicators of those outcomes. Instructors will report on measures of student learning according to these outcomes and indicators. A full list of these outcomes and indicators can be found here. THIS COURSE addresses two specific learning outcomes: (1) Reasoning in the Social Sciences, and (2) Intercultural and Global Awareness. Here are the indicators associated with those outcomes:

#### Outcomes

Reasoning in the Social Sciences

#### Indicators

1. Identify fundamental concepts in social sciences.
2. Identify interconnections among and differences between social institutions, groups, and individuals.
3. Analyze the ways in which values and beliefs relate to human behavior and social relationships.

Intercultural and Global Awareness

1. Identify advantages and challenges of diversity and inclusion in communities and organizations.
2. Address significant global challenges and opportunities in the natural and human world.

The instructor and teaching assistant will assess students’ competencies (e.g., below competent, competent, above competent) for these indicators based on students’ completed work on reading notes and exams, specifically work related to these specific indicators. This assessment will be relayed to the VT Office of Assessment & Evaluation, which will compile data for all courses contributing to each learning outcome. Student identities will not be known by anyone besides the instructor and teaching assistant.

## **HONOR CODE**

The Undergraduate Honor Code pledge that each member of the university community agrees to abide by states: “As a Hokie, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

Students enrolled in this course are responsible for abiding by the Honor Code. A student who has doubts about how the Honor Code applies to any assignment is responsible for obtaining specific guidance from the course instructor before submitting the assignment for evaluation. Ignorance of the rules does not exclude any member of the University community from the requirements and expectations of the Honor Code. For additional information about the Honor Code, please visit: [www.honorsystem.vt.edu](http://www.honorsystem.vt.edu)

## **HOW TO SUCCEED IN THIS COURSE**

- *Attend class and participate in discussion.*
- *Keep up with the readings.*
- *If something is not clear, ask a question.*
- *Clarify expectations with the Professor.*

## COURSE SCHEDULE

### SECTION 1: PERSPECTIVES, VALUES & STRATEGIES

1. AUG 21 (T): INTRODUCTION TO THE CLASS AND TO SUSTAINABILITY

2. AUG 23 (Th): THE VALUE OF VALUES

Reading:

- Christopher Ketcham. (2008). "They Shoot Buffalo, Don't They: Hazing America's Last Wild Herd" Harper's Magazine 316(1897): 66-74.

3. AUG 28 (T): WHAT'D HE SAY?

Reading:

- Bryan G. Norton. (2005) "An Innocent at the EPA" Sustainability: A Philosophy of Adaptive Ecosystem Management. 1-44.

4. AUG 30 (Th): **MOVIE/CHAT: NATIONAL GEOGRAPHIC HUMAN FOOTPRINT**

5. SEP 4 (T): SUSTAINABILITY SYSTEMATICALLY

Reading:

- Donella Meadows. (2008) "The System Lens" and "The Basics" Thinking in Systems. 1-34.

### SECTION 2: ENVIRONMENTAL SYSTEMS

6. SEP 6 (Th): MUD WRESTLING

Reading:

- David R. Montgomery. (2007). "Good Old Dirt" and "The Skin of the Earth" in Dirt: The Erosion of Civilizations. 1-26.

7. SEP 11 (T): ALIEN INVASIONS & TROPHIC CASCADES

Reading:

- David Quammen. (1996). "Rarity Unto Death" in The Song of the Dodo: Island Biogeography in an Age of Extinctions. 329-344.

8. SEP 13 (Th): EVOLUTION & RIPPED GENES

Reading:

- Simon Levin. (1999). "The Nature of the Environment" in Fragile Dominion: Complexity and the Commons. 17-38.

### SECTION 3: SOCIAL SYSTEMS

9. SEP 18 (T): "TRADITIONAL" SOCIAL NETWORKS

Reading:

- Tepilit Ole Saitoti. (1986) "Growing up as a Herder," "My Mother," "Naikosiai and I," "Man of the Serengeti," "Nairobi" & "The First Takeoff" in The Worlds of a Maasai Warrior. 3-24, 95-111.

10. SEP 20 (Th): THOUGHTS ON SOCIAL CONNECTIONS

Reading:

- Albert-László Barabási. (2003). "Introduction," "The Random Universe," and "Small Worlds" in Linked: How Everything Is Connected to Every Else and What It Means for Business, Science, and Everyday Life. 1-24, 41-54.

11. SEP 25 (T): SOCIALITY AND INFORMATION EXCHANGE

Reading:

- Steven Johnson. (2008) “Author’s Note” and “The Electricians” in The Invention of Air. xvii-xx, 15-61.

#### SECTION 4: ECONOMIC SYSTEMS

##### 12. SEP 27 (Th): THE EARLIEST ECONOMIES

Reading:

- Jared Diamond. (1999). “Farmer Power” and “To Farm or Not to Farm” in Guns, Germs and Steel: The Fates of Human Societies. 85-92, 104-113.

##### 13. OCT 2 (T): MERCANTILISM IN THE COLONIES

Reading:

- William Cronon. (1983, 1996). “Bounding the Land” and “Commodities of the Hunt” in Changes in the Land: Indians, Colonists, and the Ecology of New England. 54-108.

##### 14. OCT 4 (Th): THE SUPER-MARKET: GLOBAL COMMERCE

Reading:

- Sarah Murray. (2007). “The Business of Bones” and “Cannon Fodder” in Moveable Feasts: From Ancient Rome to the 21<sup>st</sup> Century, the Incredible Journeys of the Food We Eat. 20-55.

MIDTERM EXAM HANDED OUT (red = scary)

##### 15. OCT 9 (T): EXAM WORK DAY (Exam due Th 10/11, 11:53pm)

#### SECTION 5: CONCEPTUALIZING INTEGRATED SYSTEMS

##### 16. OCT 11 (Th): MOVIES: JOHN AND MAX

Readings:

- Zip

##### 17. OCT 16 (T): PEOPLE HEART PLANTS. WHAT DO YOU HEART?

Reading:

- Michael Pollan. (2001). “The Human Bumblebee” and “Beauty and the Tulip” in The Botany of Desire: A Plant’s Eye View of the World. xiii-xxv, 59-110.
- Evaluation of me (we’ll do this in class)

##### 18. OCT 18 (Th): CORN FLAKES AND COUP D’ETATS

Reading:

- Dan Koeppel. (2008). “The World’s Most Humble Fruit” and “Corn Flakes and Coup D’Etats” in Banana: The Fate of the Fruit That Changed the World. xii-xix, 51-70.

##### 19. OCT 23 (T): COMPLEX ADAPTIVE SYSTEMS

Reading:

- F. Stuart Chapin, Gary P. Kofinas & Carl Folke (eds). (2009). “A Framework for Understanding Change” in Principles of Ecosystem Stewardship: Resilience-Based Natural Resource Management in a Changing World. 3-12, 14-18, 23-25.

#### SECTION 6: RESILIENCE, REGIME SHIFT & DIVERSITY

##### 20. OCT 25 (Th): THE GREAT PLAINS CASE

Reading:

- Wil S. Hylton. (2012) “Broken Heartland: The looming collapse of agriculture on the Great Plains” Harper’s Magazine **325**(1946): 25-35.  
<http://www.harpers.org/archive/2012/06/hbc-90008690>

21. OCT 30 (W): THE OPIOID CASE

Reading:

- James Nachtwey. (2018) “The Opioid Diaries” Time Magazine March 5, 2018.  
<http://time.com/opioid-addiction-epidemic-in-america>

22. NOV 1 (Th): PAYING FOR THE PARTY & **MIDTERM EXAM DISCUSSION**

Reading:

- Elizabeth Armstrong & Laura Hamilton (2013) “Introduction” in Paying for the Party: How College Maintains Inequality. 1-25.

**NOV 6 (T): NO CLASS**

23: NOV 8 (Th): DIVERSITY BLOWS

Reading:

- Laura Liswood. (2010). “Beware of Noah’s Ark” in The Loudest Duck: Moving Beyond Diversity While Embracing Differences to Achieve Success at Work. 1-29.

24: NOV 13 (T): TV RULES

Reading:

- Steven Johnson. (2005). “The Sleeper Curve” & “Television” in Everything Bad Is Good For You. xii-xiv, 1-14, 62-115.

## **SECTION 7: GLOBAL CRISES - SOCIAL AND ECOLOGICAL CONCERNS**

25. NOV 15 (Th): SUSTAINING THE AMERICAN DREAM?

Reading:

- Jon Meacham. (2012). “Keeping the Dream Alive” Time Magazine **180**(1): 26-39.  
[http://www.time.com/time/specials/packages/article/0,28804,2117662\\_2117682\\_2117680,00.html](http://www.time.com/time/specials/packages/article/0,28804,2117662_2117682_2117680,00.html)

**NOV 20 (T): NO CLASS – THANKSGIVING BREAK**

**NOV 22 (Th): NO CLASS – THANKSGIVING BREAK**

26. NOV 27 (T): BOOMERANG GENERATION – HI MOM, I’M HOME

Reading:

- Katherine Newman. (2012). “Introduction” and “Why are Accordion Families Spreading?” in The Accordion Family: Boomerang Kids, Anxious Parents, and the Private Toll of Global Competition. ix-xxiii, 37-62. 4

27. NOV 29 (Th): BUCKS AND DUCKS

Reading:

- David Malakoff et al. (2012) “Dispatches from the Front Lines of Ecology and the Economic Meltdown” Conservation Magazine **12**(4): 40-46.  
<http://www.conservationmagazine.org/2011/11/economic-meltdown/>

## **SECTION 8: TRANSITIONING TO NEXT SEMESTER**

28. DEC 4 (T): SAYS WHO? I DON'T BELIEVE IT!

Reading:

- Pascal Diethelm and Martin McKee. (2009). "Denialism: what is it and how should scientists respond?" European Journal of Public Health **19** (1): 2-4.
- William R. L. Anderegg et al. (2010). "Expert Credibility in Climate Change" Proceedings of the National Academy of Sciences **107**(27): 12107-12109.  
<http://www.pnas.org/content/early/2010/06/04/1003187107.full.pdf+html>

Class Activity:

- **REVIEW AND FINAL EXAM HANDED OUT**