

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 (NCB) 220
Meeting Times: 9:30am-10:45am T, Th

INSTRUCTOR CONTACT INFORMATION

Name: Dr. Tim Baird
Office Location: Zoom
Office Hours: By Zoom Thursdays at 4pm; or by appointment

Email address: tbaird@vt.edu

TEACHING ASSISTANT CONTACT INFORMATION

Name: Geoffrey Otieno
Office Location: Zoom
Office Hours: By appointment
Email address: geoffreyoo@vt.edu (CONTACT GEOFFREY WITH YOUR QUESTIONS ABOUT READING AND READING NOTES) He is going to be attending to these assignments.

COURSE EXPECTATIONS TO SAFEGUARD OUR HEALTH

Holy moly... there's still a pandemic out there! I know nearly all of us are vaccinated, but there are many who are not, including my young children - and the Delta variant is dangerous. We're wearing masks in this class. When we're in-person together we're going to do this small thing to protect each other – and follow VT's rules.

COURSE DESCRIPTION & GOALS

Sustaining the world's interconnected environmental, social, and economic systems is arguably the most pressing concern that humans now face. (Except for the pandemic.) 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 (including the pandemic).

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;
- (7) **create** and support arguments related to pressing sustainability challenges; and
- (8) **survive a pandemic**

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

COURSE MATERIALS

No Required Text – I'm providing you with scanned readings, links, etc.

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 Canvas 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 – up to a maximum of 35 points deducted.** 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 magazine and journal articles, selections from books, textbooks, and web links. It is important that you do the readings before the appropriate class periods. Plan ahead so that you will not get behind. PDFs of readings or links to sources on the internet can be found on Canvas. 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 (and self) evaluation will reflect performance on:

Reading notes	45%
Final exam	21%
Midterm exam	24%
Pink Time (self-evaluation)	10%
Final grade	100%

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

Pink Time: Based on research compiled by Daniel Pink (see *Drive*, 2011) we will be conducting a bit of an experiment in this course. For a portion of the course (essentially 2 weeks including personal time and class time) I will be giving you the authority and the freedom to pursue anything that interests you; that you want to learn about; that you want to develop – with the only caveat being that you will need to share what you’ve done with the group. My goal here is to encourage you to become more of an active leader in your own education. This is how it will work: **skip class, do anything you want, and give yourself a grade.** Let me explain. On 2 days that we would normally have regular reading assignments, we won’t. Instead, you will have free days to pursue your own learning. My expectation is that you take the class time (1.25 hours) and homework time (1.75 hours) totaling approximately 3 hours and do something – either by yourself or in groups (with classmates or others). It’s totally your call. On the day following each of the “PINK TIME” days we will return to class to share what we did.

These efforts will constitute 10% of your final grade and you will be given the authority to grade yourselves.

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 4 or 5. 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 complement 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:

<u>Outcomes</u>	<u>Indicators</u>
Reasoning in the Social Sciences	<ol style="list-style-type: none"> 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 2 human behavior and social relationships.
Intercultural and Global Awareness	<ol style="list-style-type: none"> 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

USE OF INFORMATION PROVIDED IN THIS COURSE

All materials provided in this course are limited to use by students who are enrolled in this course for the current semester. As a student enrolled in this course, you are expressly prohibited from using these materials outside of the course without the instructor's specific consent. "Materials" includes: all reading notes, handouts, PowerPoint presentations, exams, and any other assignments and assessments as well as all information provided on Canvas for this course. Using the materials outside of this course includes, but is not limited to, selling the information to any organization that then makes the information available to other students for study guides (*ahem – COURSE HERO*).

HOW TO SUCCEED IN THIS COURSE

- *n-gauge in the class.*
- *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

Week 1 -----

AUG 24 (T): INTRODUCTION TO THE CLASS

AUG 26 (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.

Week 2 -----

AUG 31 (T): WHAT'D HE SAY?

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

SEP 2 (Th): SUSTAINABILITY SYSTEMATICALLY

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

(Introduce Pink Time)

Week 3 -----

SECTION 2: ENVIRONMENTAL SYSTEMS

SEP 7 (T): MUD WRESTLING

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

SEP 9 (Th): 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.

Week 4 -----

SEP 14 (T): EVOLUTION & RIPPED GENES

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

(Model Pink Time)

SECTION 3: SOCIAL SYSTEMS

SEP 16 (Th): "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.

Week 5 -----

SEP 21 (T): 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.

SEP 23 (Th): SOCIALITY AND INFORMATION EXCHANGE

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

Week 6 -----

SEP 28 (T): NO CLASS - SKIP (Pink Time 1)

SEP 30 (Th): IN CLASS - SHARE (Pink Time 1)

Week 7 -----

SECTION 4: ECONOMIC SYSTEMS

OCT 5 (T): 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.

OCT 7 (Th): 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.

MIDTERM EXAM HANDED OUT

Week 8 -----

OCT 12 (T): THE SUPER-MARKET: GLOBAL COMMERCE

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

OCT 14 (Th): EXAM WORK DAY (EXAM DUE FRI 10/15, 11:53pm)

Week 9 -----

SECTION 5: DISCOVERING COMPLEX SYSTEMS

OCT 19 (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.

MID-COURSE EVALUATION

OCT 21 (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.

Week 10 -----

OCT 26 (T): RACE, FEMINISM & EDUCATION

Reading: bell hooks (1994) “Feminist Thinking,” “Feminist Scholarship,” and “Building a Teaching Community” in Teaching to Transgress: Education as the Practice of Freedom. 111-165.

OCT 28 (Th): 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.

Week 11 -----

SECTION 6: RESILIENCE, THREAT, REGIME SHIFT & DIVERSITY

NOV 2 (T): 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>

NOV 4 (Th): NO CLASS – SKIP **(Pink Time 2)**

Week 12 -----

NOV 9 (T): IN CLASS – SHARE **(Pink Time 2)**

NOV 11 (Th): STEREOTYPES IN THE AIR

Reading: Claude M. Steele (2010) Readings (incl. Introduction) from Whistling Vivaldi.

MIDTERM EXAM DISCUSSION

Week 13 -----

NOV 16 (T): GUEST SPEAKER – Dr. Derek Alderman, University of Tennessee

Reading: pending

NOV 18 (Th): TV RULES

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

Week 14 -----

NOV 23 (T): THANKSGIVING BREAK

NOV 25 (Th): THANKSGIVING BREAK

Week 15 -----

SECTION 7: GLOBAL CRISES

NOV 30 (T): ONE FLU OVER THE CUCKOO'S NEST

Reading: David Quammen (2012) Chapters 113-15 in Spillover. 503-520.

DEC 2 (Th): 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

Week 16 -----

SECTION 8: TRANSITIONING TO NEXT SEMESTER

DEC 7 (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.

REVIEW AND FINAL EXAM HANDED OUT