

## **SUST 434 - Synthesis of Sustainability Perspectives and Innovations - Spring 2016**

(This document available at: <http://sust.unm.edu>)

### **Instructor:**

Dr. Bruce T. Milne, Professor of Biology & Director, UNM Sustainability Studies Program

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Office Hours: Tuesday 9:30 - 10:00 and Friday 11:00 – 11:30,

or by appointment at our convenience

**Class sessions:** Tuesday, Thursday 12:30-1:45 p.m. Mitchell Hall, Room 219

### **Books:**

- 1) Diamandis, P. and S. Kotler. 2012. Abundance: The Future Is Better Than You Think. Free Press. ISBN 9781451614213
- 2) Toyama, K. 2015. Geek Heresy: Rescuing Social Change from the Cult of Technology. Public Affairs, New York. ISBN 978-1-61039-528-1
- 3) Harris, F. (ed.). 2015. New Mexico 2050. University of New Mexico Press. ISBN 978-0-8263-5555-3 (paperback)

### **Course description:**

Presents frameworks for complex and creative analysis, including systems thinking and synergistic integration of the three pillars of sustainability: environment, equity, economy. Examines innovative local and international case studies in environment, business, policy, and community development. Prerequisites: SUST 134

**Goals, purposes, and expectations:** This course is suited for students interested in the theoretical and practical aspects of community development, local economies, resource conservation, community activism, and environmental protection.

This course provides the opportunity to integrate experiences and knowledge gathered in Introduction to Sustainability and Environment (SUST 134), Sustainability Practicum (SUST 334), and the electives students have taken toward the minor degree in Sustainability Studies. Students will engage in more complex levels of understanding the challenges of sustainability as they prepare for the capstone project ahead (SUST 499). Most students gravitate naturally to one or two of the three pillars of sustainability (environmental protection, social justice, and economic vitality). This course examines all pillars and the interactions among them. We will study frameworks for making meaning from complex

situations and integrated design, including systems thinking and interdisciplinary philosophical underpinnings of sustainability. This will enable us to acquire a broader lens through which to design synergistic applications of sustainability's three pillars.

We engage in a caring, creative learning experience with responsible students and thereby gain perspectives that empower us all as agents of sustainability. From Steve Covey's *Seven Habits of Highly Effective People* we favor an outcome that is "win/win". Some languages have no words for "teaching" but over 30 words for "learning". Indeed we can only learn; learning is the basis of personal development and enrichment.

**Plagiarism:** The Faculty Handbook, policy D100, affords instructors the authority to respond to plagiarism by granting a grade of "...F' in the course and the involuntary withdrawal of the student from the class..." Avoid committing plagiarism by making all your work your own. Do not cut and paste from web sites, Dropbox, or articles. Brief, direct quotes are allowed but must be documented as such. *Always put quoted text within quotation marks or in a smaller italics font, with complete attribution to the source.* The only exception in this course is for the biographical sketch assignment where you actually need to cut and paste large amounts of text from the subjects' writings in order to create word clouds.

**Course design:**

We focus on scholarship and theory with which to guide effective solutions for sustainability.

<u>Grading</u>	<u>%</u>	<u>Notes</u>
Midterm	10	March 3
Final	15	Thursday, May 12, 10:00 a.m. – noon.
<u>Looking within:</u>		
My Worldview	10	What do you believe? Feb.2
Technology self-audit	10	Multi-generational shifts in technology. Feb 9.
Thirty days of The Method	10	Learn, practice for 30 days, and teach two new people. March 8
<u>Looking beyond:</u>		
Poster: NM Solutions 2026	20	Scholarly poster, 10+ citations; participation in campus event
<u>Portfolio:</u>		
Panel participation	5	Join a topical panel to share insights from one of your assignments.
Experience Diaries	<u>20</u>	There will be approximately 20 assignments including the
	100	Experiential Diaries. Please complete these to prepare for class. Doing these assignments is proven to raise exam grades.

Keep track of your assignments and due dates with this handy [assignment checklist](#).

**SUST 434 - Schedule Spring 2016**

Notes: 1) Where the column “Due for this class” lists “**Read...**”, please complete and print the “[Experience Diary](#)” to hand in for credit.

2) Assigned chapters from *Abundance* are listed, e.g., “A 1-3” means *Abundance*, chapters 1-3. Assigned chapters from *Geek Heresy* are listed, e.g., “GH 1-3”.

Date	Topics	Due for this class:	Resources	Activities
Jan 19	Introduction		<a href="#">Experience Diary</a>	Syllabus; Skills inventory
21	Worldviews	<b>Read <a href="#">Bijker (2001)</a></b> and fill out the <a href="#">Experience Diary</a> to bring to class.	<a href="#">Reading as a scholar</a> ;  <a href="#">SSP Writing Guide</a>	Skills summary;  Discuss Bijker (2001);  <a href="#">My Worldview assignment</a>
26	Worldviews	<b>Read <a href="#">Fudpucker (2001)</a></b>		Discuss Fudpucker (2001); Panel signups; <a href="#">Grading criteria</a> ;
28	New Mexico’s Situation		<a href="#">Trends and changes</a>	Legacy of Fall 2015 class projects. Looking at status quo in NM

<b>Feb 2</b>	Worldviews	<i><b>My Worldview</b></i>		Presentation <b>Worldview Panel;</b> <a href="#">Technology Audit assignment;</a> <a href="#">Table/Figure Exercise</a>
4	The Method		Guidebook: Mindfulness, Intention, and Gratitude	Start your 30 days of practice. <a href="#">The Method Assignment</a>
9	Our greatest challenge; Technology Audit	<b>Read <a href="#">A 1</a></b> <i><b>Technology Audit due</b></i>	<a href="#">Seppelt et al. (2014)</a> peak resource use	Discuss A 1 <b>Technology Audit Panel;</b>
11	Vision for our future	<b>Read A <a href="#">2-3</a></b>		Discuss A 2-3 <a href="#">New Mexico Solutions 2026 Assignment (TBA)</a>
16	Optimism and Inevitability	<b>Read A 4-6</b>	Singularity <a href="#">RoboBees</a> Jevons' paradox	Discuss A 4-6,
18	Two Billion Customers Served	<b>Read A 8,9,13</b>	Robotics	Discuss A 8,9, 13
23	The forces of abundance	<b>Read A 11,12</b>		Discuss A 11,12
25	Peak of the Pyramid	<b>Read A 14-17</b>		Discuss A 14-17 <a href="#">Literature as Time Machine</a>
<b>Mar 1</b>	Future Trends	<b>Read A 18-19</b>		Discuss A 18-19; Review for exam;
3	<b>Midterm Exam</b>	<b>Midterm Exam</b>		

8	Personal wellbeing tools	<b>The Method and gratitude jars</b>		<b>The Method Panel</b>
10	NM Economics	<b>Read NM 1</b>		Discuss NM 1. Guest, Lee Reynis
15-17	<b>Spring Break</b>			
22	NM Environment & Water	<b>Read NM 5</b> <b>Poster theme</b>		Discuss NM 5, Guest, Bob Berrens
24	NM Education	<b>Read NM 2</b>		Discuss NM 2
29	NM Health	<b>Read NM 3</b>		Discuss NM 3. Guest Jamal Martin
31	NM Demographics	<b>Read NM 4</b> <b>Poster citations</b>		Discuss NM 4. Guest Manuel Garcia y Griego
<b>Apr 5</b>	NM Tribal communities	<b>Read NM 6</b> <b>Data source</b>		Discuss NM 5. Guest Greg Cajete?
7	Conflicting results; Law of Amplification	<b>Read GH 1-2</b>		Presentation, Video. Discuss GH 1-2
12	Geek Myths	<b>Read GH 3</b>		Discuss GH 3
14	Quick Fixes	<b>Read GH 4</b> <b>Poster draft</b>		Discuss GH 4
19	Amplifying people	<b>Read GH 6</b>		Discuss GH 6
21	Aspirations	<b>Read GH 8</b> <b>Sust Expo Event</b>		Discuss GH 8
26	Nurturing change	<b>Read GH 10</b>		Discuss GH 10
28	<b>Solutions 2026 Event</b>	<b>Poster due</b>		Our New <b>Mexico Solutions 2026 Event</b>

<b>May 3</b>	Solutions debrief			<b>Solutions Panel</b>
5	Evaluation & review	Bring questions to ask about the exam	<a href="#">Trajectory of a Graduate Student</a>	Discussion: Career Paths for This Generation. Review for exam
12	<b>Final Exam</b>	<b>10:00 a.m. – noon</b>		