

***Sustainable Living***  
***- An Introduction to Systems and Resilience Thinking -***

ANTH 3385, JANUARY TERM 2018  
9:00 AM - 12:00 PM & 1:00 – 4:00 PM, DAILY  
Fondren Science 153

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**Professor:** Dr. Christopher Roos  
**Office Hours:** DAILY from 4:00 – 5:00pm  
**Office:** Heroy Hall 444  
**Phone:** 214.768.2753  
**Instructor email:** [croos@smu.edu](mailto:croos@smu.edu)

**Course Description:** Sustainability describes our ability to meet the needs of present human communities without compromising the ability of future generations to do the same and without doing unnecessary harm to the planet. Knowing *how* to live sustainably requires broad consideration of human cultures, values, economies, and the biophysical systems of the earth, as well as the complex intersections of all of these phenomena. In this course, students will be introduced to the basic concepts and issues in Sustainability Science, including non-linear systems thinking, and social-ecological resilience. This course satisfies the Ways of Knowing foundation and the Oral Communication and Information Literacy proficiencies of the University Curriculum.

**Learning Objectives:** By the end of the course you will be able to:

- 1) Demonstrate the value of inter/multi-disciplinary perspectives on sustainability through a student-directed research project.
- 2) Employ systems and resilience thinking in the analysis of a socio-environmental sustainability problem.

**University Curriculum Student Learning Outcomes include:**

- 1) Students will select, organize and use appropriate evidence or information to suit a specific or targeted audience (OC).
- 2) Students will use appropriate vocal and visual cues to deliver a presentation to a specific or targeted audience (OC).
- 3) Students will select and use the appropriate research methods and search tools for needed information (IL).
- 4) Students will evaluate sources for quality of information for a given information need (IL).
- 5) Students will demonstrate knowledge of more than one disciplinary practice (KNW).
- 6) Students will explain how bringing more than one practice to an examination of the course topic contributes to knowing about that topic (KNW).

**Required Texts:**

- Donella Meadows (2008) *Thinking in Systems*. Chelsea Green Publishing, White River Junction, VT.
- Brian Walker and David Salt (2006) *Resilience Thinking*. Island Press, Washington DC.
- Emilio Moran (2006) *People and Nature*. Blackwell, Oxford, UK.

**Course Website:** The instructor will host a course website through Canvas (<https://canvas.smu.edu/>). On the course website, you will find the syllabus, the course grade book, lecture files, and grading rubrics. The course Canvas site will also be where you will submit your annotated bibliography, and presentation files.

**Grading:** Grades will be assigned on a four-point scale for each assignment and grading category. The weighted average of all grades will determine the final grade (see percentage weights below), with A=4, B=3, C=2, D=1, and F=0.

A Grade of Incomplete (I) will be granted only at the discretion of the instructor.

<b><u>Category</u></b>	<b><u>Date</u></b>	<b><u>Percentage of Final Grade</u></b>
In-class writing	Daily	10%
Exam I	Jan 10 (Thurs)	25%
Annotated bibliography	Jan 14 (Mon)	20%
Exam II	Jan 15 (Tue)	25%
Presentation	Jan 16 (Wed)	20%
<b><u>Total</u></b>		<b><u>100%</u></b>

Final grades will be assigned based on the weighted average of category scores on a 4-point scale. For example, A = 3.85+, A- = 3.50-3.84, B+ = 3.16-3.49, B = 2.85-3.15, B- = 2.50-2.84, etc.

**In-class writing:** At the start of each new section of the class, we will begin with a short, in-class writing assignment in which you will be asked to identify key information from the readings.

**Assignments:** Each student will conduct a literature review that explores the scientific literature behind major sustainability issues. You will prepare/deliver two products for this project. The first is a 10-entry annotated bibliography using refereed, scholarly literature resources from at least two scientific disciplines. The second is an 8-minute class presentation that is supported with visual aids (i.e., Powerpoint). The documents associated with each of these must be submitted via Canvas.

**Exams:** Two in-class exams will be administered. Each exam will consist of two essay questions.

**Readings:** Prior to the term, students are expected to read Emilio Moran's *People and Nature*. During the term, students are expected to complete required readings **prior to class** on the dates indicated.

**Citation Format:** You must use the SAA Style Guide (available on Canvas) for the citations in your annotated bibliography and your research paper. When citing specific ideas, **you must cite to the specific page number(s) where the idea you are citing is described.**

**Statement on Late Submission of Assignments:** I will only accept assignments after the due date/time **with prior approval**. Late assignments may be subject to a penalty of one letter grade per 24 hour-period that the paper is late. I reserve the right to make decisions about late assignments on a case-by-case basis. ***Note that no late Presentation file submissions can be accepted.***

**Attendance and Professionalism:** Attendance is necessary to succeed in this course! Students should attend class promptly and maintain a respectful and professional attitude. Students who miss more than three class meetings (morning or afternoon) or regularly display unprofessional behavior will be dropped from the course. If you exceed this absence threshold after the Add/Drop period, your letter grade will be reduced by 0.5 points (half of a grade) for each absence exceeding the threshold.

Unprofessional students will be considered “absent” and may be asked to leave the class. Professionalism entails:

- 1) No late arrival to or early departures from class
- 2) No cell phone use
- 3) No unapproved computer or tablet use (see below)
- 4) No disrespectful treatment of the instructor or classmates

**Policy on Computer and Tablet Use:** A student may only use a personal computer or tablet in class with written documentation from Disability Accommodation & Success Strategies that indicates its need to meet a specific accommodation. Students who are authorized to use their computers must sit in the front row of the class or in a location chosen by the Professor.

#### ***Other Obligatory Statements:***

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**Disability Accommodations:** Students needing academic accommodations for a disability must first register with Disability Accommodations & Success Strategies (DASS). Students can call 214-768-1470 or visit <http://www.smu.edu/Provost/ALEC/DASS> to begin the process. Once registered, students should then schedule an appointment with the professor as early in the semester as possible, present a DASS Accommodation Letter, and make appropriate arrangements. Please note that accommodations are not retroactive and require advance notice to implement.

**Southern Methodist University Code on Academic Integrity:** Cheating, plagiarism, academic sabotage, fabrication, and facilitating academic dishonesty are violations of the SMU Honor Code ([http://smu.edu/studentlife/studenthandbook/PCL\\_05\\_HC.asp](http://smu.edu/studentlife/studenthandbook/PCL_05_HC.asp)) and will not be tolerated. Any detected case of plagiarism or of cheating on any assignment or exam will result in a score of zero for that grade category, and will automatically result in the submission of a Faculty Disposition form to the Honor Council.

As per university policy, attendance exceptions may be made for the following reasons ***if the student provides sufficient notice to the instructor in advance.***

\* **Religious Observance:** Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence (See University Policy No. 1.9).

\* **Excused Absences for University Extracurricular Activities:** Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work (University Undergraduate Catalogue).

However, because all assignment submission is via Canvas, excused absences ***do not excuse late submission of assignments.***

Note also, that these absences are not in addition to the course Attendance and Professionalism policy, but are subsumed within it.

## SCHEDULE OF LECTURES & READING ASSIGNMENTS

\* Note: Schedule subject to modification, if necessary. All changes will be announced in class. All readings are from Walker and Salt (W&S), Meadows (ME), and Moran (MO).

<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Reading</b>
<b>Pre-term reading</b>		People and Nature	MO, all
<b>Day 1</b>	<b>Jan 7 AM</b>	Intro to the course <i>The 11<sup>th</sup> Hour</i>	
	<b>Jan 7 PM</b>	Living in a Complex World	W&S 1, Case 1
<b>Day 2</b>	<b>Jan 8 AM</b>	<i>Earth from Space</i> Thinking in Systems, part I	ME Intro, Ch. 1, 2
	<b>Jan 8 PM</b>	Thinking in Systems, part II	ME Ch. 3 & 4
<b>Day 3</b>	<b>Jan 9 AM</b>	Thinking in Systems, part III	ME Ch. 5 & 6
	<b>Jan 9 PM</b>	Thinking in Systems, part IV	ME Ch. 7 & 8
<b>Day 4</b>	<b>Jan 10 AM</b>	Systems Thinking Overview	
	<b>Jan 10 PM</b>	<b>Exam I</b>	
<b>Day 5</b>	<b>Jan 11 AM</b>	<i>Human Planet</i> Resilience Thinking, part II	W&S 2, Case 2
	<b>Jan 11 PM</b>	Resilience Thinking, part III	W&S 3, Case 3
<b>Day 6</b>	<b>Jan 14 AM</b>	Resilience Thinking, part IV	W&S 4, Case 4
	<b>Jan 14 PM</b>	Resilience Thinking, part V <b>Annotated Bibliography due by 5pm</b>	W&S 5, Case 5
<b>Day 7</b>	<b>Jan 15 AM</b>	Resilience Thinking, part VI	W&S 6, Postscript
	<b>Jan 15 PM</b>	<b>Exam II</b>	
<b>Day 8</b>	<b>Jan 16 AM</b>	Student presentations	
	<b>Jan 16 PM</b>	Discussion and wrap-up	