ENV 506 – Earth Resources & Human Society
SYLLABUS – Winter 2017

Professor: Dr. Jess Vogt – *Please call me "Jess"*

Email: jess.vogt@depaul.edu or jessica.m.vogt@gmail.com

Cell: (920) 850-2016 – *OK to text, call, leave voicemails here; this is my only phone number*

Office: McGowan South 203 G

Office Hours: By appointment (email me), but also my door is always open.

Class: Mon 5:45-9:00 pm / Levan Center Room 402

ABOUT THE PROFESSOR

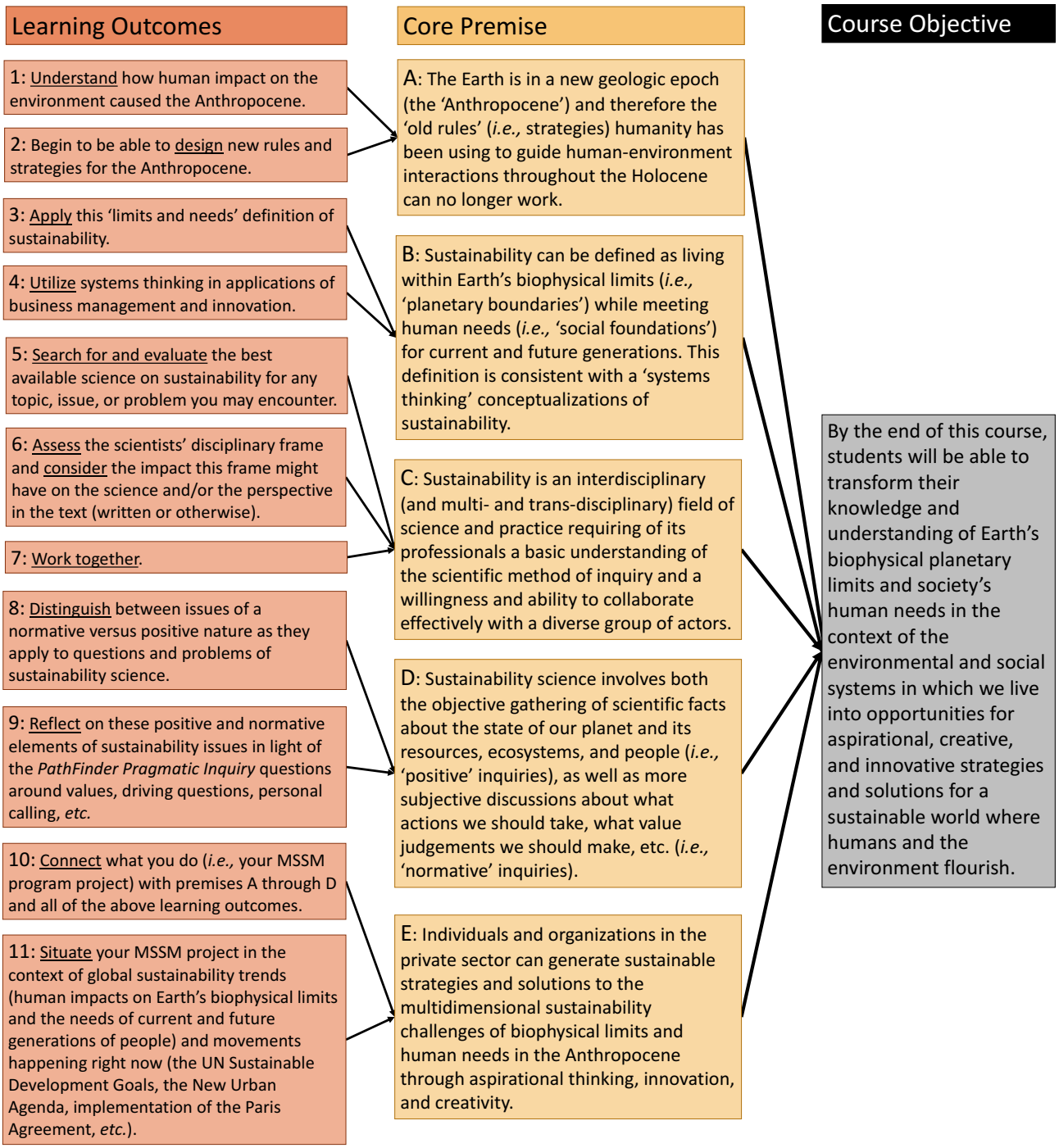
I am a sustainability scientist and teacher-scholar passionate about creating spaces in which everyone can find their place to contribute to creating a world where all can thrive and flourish. As an Assistant Professor in the Department of Environmental Science and Studies in the College of Science and Health at DePaul University, I teach sustainability science, urban forestry, and mixed methods courses on social-environmental systems, and collaborate with students to do research in the Lab for Urban Forestry in the Anthropocene (LUFA; www.lufa-depaul.org). My research seeks to answer the question, ***How can we create more resilient communities of humans and nature?*** I consider myself a social-ecological systems and sustainability scientist and my research is anchored in the idea that we cannot study systems of nature without also studying the concentric social, economic, and institutional systems of people. For the past several years, my research has examined the social and ecological impact of the coproduction of the urban forest by nonprofit organizations and neighborhood groups in 5 U.S. cities (Atlanta, Detroit, Indianapolis, Philadelphia, and St. Louis), funded by a grant I managed from the U.S. Forest Service. Most recently, I have been investigating the connections between urban forestry research, practice, and education, and broader sustainability initiatives. I received my Ph.D. in Environmental Science (concentration in urban forestry and urban ecology), Master of Public Affairs (concentration in sustainable development), and Master of Science in Environmental Science (concentration in applied ecology) from the School of Public and Environmental Affairs (SPEA) at Indiana University (Bloomington Indiana USA). I attended Lawrence University (Appleton Wisconsin USA) for undergrad, majoring in Environmental Studies and Biology. In addition to my academic appointment at DePaul, I maintain an affiliation as a Researcher with the Bloomington Urban Forestry Research Group (BUFRG; www.indiana.edu/~cipec/research/bufrg_about.php) at Indiana University, I am an Associate Editor for the journals *Urban Forestry and Urban Greening* and *Forestry*, Vice Chair of the Science and Research Committee of the International Society of Arboriculture, and a Returning Fellow/Mentor for the Byron Fellowship transformational sustainability leadership program.

Communication Philosophy: In order to make this a successful a learning experience for all of us, I am available to meet with students outside of class as much as possible. Therefore:

- I am in my office (203 G) or lab (217) on most weekdays between 9am and 5pm and my door is always open. Please feel free to stop by anytime with questions, comments or concerns about the class, or even just to chat!
- Email me or talk to me before or after class if you want to schedule an appointment.
- Feel free to call or text me on my cell phone (920-850-2016) during reasonable hours with questions or concerns. If you leave a voicemail, I'll get back to you.

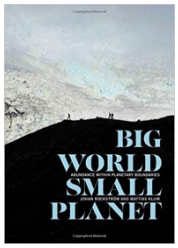
COURSE INFORMATION

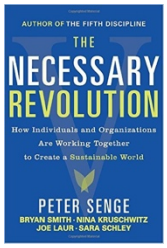
This course is a core course of the Master's of Science in Sustainable Management (MSSM) program through the Kellstadt Graduate School of Business. It is taught by the Department of Environmental Science & Studies (ENV). It aims to orient MSSM students to the mix of natural and social sciences that are 'sustainability science.'

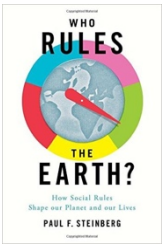


COURSE MATERIALS

Required Books:







Rockström, J. & Klum, M., 2015. **Big World Small Planet: Abundance Within Planetary Boundaries**, New Haven, CT: Yale. (Hardcover, 208 pp., ISBN: 9780300218367) View on Amazon

Senge, P. et al., 2010. **The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World**, New York: Crown Publishing. (Paperback, 416 pp., ISBN: 9780385519045) View on Amazon

Steinberg, P.F., 2015. **Who Rules the Earth? How social rules shape our planet and our lives**, Oxford, UK: Oxford University Press. (Hardcover, 352 pp., ISBN: 9780199896615) View on Amazon

***PathFinder* Lab Journal:**

MSSM students* should be familiar with the *PathFinder* Lab Journal – the binder of guided journaling activities students work through during the course of completing the MSSM degree. If you do not yet have a copy of the *PathFinder*, you can purchase one from the Barnes and Noble Campus Bookstore. The full citation for the *PathFinder* journal is below:

Nahser, R., 2015, **The Corporantes *PathFinder* Lab Journal: Vincentian Pragmatism—Systemic change in an Era of Sustainability***,* Evanston, IL: Corporantes, Inc. Chicago, IL: DePaul University Institute for Business and Professional Ethics.

*If you are not an MSSM student, you may download a version of the *PathFinder* Lab Journal as the simplified "Field Notebook" as Appendix III to *Learning to Read the Signs*, 2nd ed. (2013, F. Byron (Ron) Nahser) from the Greenleaf website: www.greenleaf-publishing.com/learning-to-read-the-signs-2nd-edition. **Note that this simplified version of the *PathFinder* journal is *not* acceptable for MSSM students.**

Additional Required Content:

In addition to chapters from the books above, we will consult additional content, including but not limited to selections from the primary and secondary scientific literature, popular science articles, selections from other books, business case studies, relevant news items, YouTube videos, TED talks, and infographics. *All additional required content will be posted in PDF form or hyperlinked from D2L in Content >> Weekly Reading Assignments. PDFs are also posted alphabetically in Content >> Additional Readings (PDFs).*

Desire2Learn – D2L:

I will use the D2L site for this class for organizing course materials (Content tab) and turning in select assignments (Dropbox tab). In addition, I may post class announcements (Home tab),

send email the class via, post relevant news articles. Login to d2l.depaul.edu and click on *EARTH RESOURCES/HUMAN SOCIETY – 2016-2017 Winter – ENV_506_201_0985* for more details.

COURSE EVALUATION

Final Grade:

Your final grade in this course will be based on your **Preparation** for class (doing the assigned readings and writing and bringing to class weekly reading responses), your **Participation** in class activities and discussions, and **Assignments** complete out-of-class.

ITEM	Points
Preparation – Weekly Reading Responses – *bring to class & turn in paper copy each week*	150
Participation – In class discussion and activities	150
Assignments	
Human-Environment Case Discussion Leadership – *in small groups, during class Weeks 2-7*	100
Paper # 1 – *due via D2L Dropbox, Friday of Week 4*	100
Paper # 2 – *due via D2L Dropbox, Friday of Week 7*	100
Generous Debate activity – *prep in class Week 8, debate during class Week 10*	50
PathFinder Journaling – *due in class, Week 9*	50
Final Assessment *(Final Paper on your MSSM project)*	
Outline – *Due with Bibliography via D2L Dropbox, Friday of Week 8*	50
Annotated Bibliography – *Due with Outline via D2L Dropbox, Friday of Week 8*	50
Final Paper – *In-class presentation during Finals period; Final paper due via D2L Dropbox, Wednesday of Finals week*	200
TOTAL	**1000**

Point Scale: The following point scale will be used to assign letter grades: A (92%-100%), A- (90%-91.9%), B+ (88%-89.9%), B (82%-87.9%), B- (80%-81.9%), C+ (78%-79.9%), C (72%-77.9%), C- (70%-71.9%), D (60%-69.9%), and F (0%-59.9%).

Weekly Reading Responses: *150 points, due weekly, turn in a typed, paper copy in class*

Each week there will be several assigned readings, usually a mix of chapters from one of the assigned books and/or PDFs of articles or case studies posted to D2L. You are expected to read this material closely and critically, and come to class prepared to discuss these readings and complete various related activities, exercises, etc. during class time.

In order to help keep us accountable to one another and give you practice articulating your thoughts in writing, please come to class with a ***300-600-word (1 page max.) Reading Response each week.*** Reading Responses are your personal, professional, and critical-analytical response and reactions to the assigned readings for the week. Since there are multiple (usually thematically related) pieces assigned each week, your Reading Response should reflect on each text, as well as connections between the texts. Note that multiple chapters from the same

book/authors can be considered a single 'text' for the purposes of your response. You might reflect on any of the following (*in no particular order; not an inclusive list – just some ideas to get you started)*:

- Consideration of the readings in relation to the Core Premises of this course (see the figure on page 2 of this Syllabus);
- Comparisons, contrasts, connections, etc. among the assigned readings;
- The authors' disciplinary background and perspective (you might want to do some googling to figure out who the author is);
- Critiques or disagreements you have with the readings (and the source of information for said critique);
- Connections between the readings and news or current events;
- Reflections on the readings based on your own previous professional experiences;
- Questions raised for you or points you didn't understand or would like to discuss more in class;
- Your emotional reactions to the readings; or,
- Any other thoughts that emerged as you were reading the texts.

Your writing in the Reading Responses should be, as much as possible, in full, grammatically correct sentences, organized into themed paragraphs, and make use of short, declarative subheadings, and/or bullet points as you deem fit. The Responses *do not* need to be an 'essay' (i.e., a single, narrative piece with a thesis/main argument and supporting paragraphs, etc.), but should be more organized than stream-of-consciousness ranting. The purpose of these weekly responses is to allow you to practice taking content you've read and integrating it with what you're learning in this and other classes as well as what you already know from experience, and putting these thoughts into coherent sentences in a quick and efficient manner. Ideally, writing the Reading Responses should take you no more than 15-30 minutes after completing the readings.

Reading Responses should be typed, printed and handed in to me at the end of each class.

Participation – *Step Up, Step Back*: *150 points*

We all come to class with a unique set of experiences, perspectives, and goals and challenges in our personal and professional lives. I encourage students in all my classes to bring their full, whole selves to class, and hope you will feel comfortable sharing this whole self in the small and large group activities we do during class time. In this way your participation is crucial to the success of the class. This being said, during class, we will encourage all of use to consider the ***step up, step back*** classroom discussion philosophy: This means that if you find yourself speaking a lot in class, you should consider *stepping back* and letting others contribute to class discussion. Conversely, if you're finding yourself holding back relative to others in the class, we encourage you to *step up* and make your voice heard. This includes recognizing who we are not only in the classroom, but also in society at large, and making a conscious effort to listen to those who might not normally be heard.

Human-Environment Case Discussion Leadership: *100 points, during Weeks 4-7, turn in related materials on D2L Dropbox before your group leads discussion.*

Class discussions on the Human-Environment Cases are our opportunity to engage in a deeper, more focused analysis of the environmental, social, and business strategy issues at play in several cases. Each group of ~4 students should craft a plan for leading a 45-minute discussion, including a 5-minute PowerPoint presentation on the background content of the assigned case and a series of discussion questions to guide the class through. *Group Assignments and the final Case selections will be posted to D2L and discussed in class during Week 2.*

Cases are a variety of source-types (book chapters, white papers, etc.) and authors (individuals, NGOs, scientists, business consultants, etc.) and will examine the various ways human communities interact with the environment. During student-led discussion, students will critique the efficacy of these strategies, discuss the normative and positive elements of the case, consider how the case addresses sustainability and complexity discussed during class, and more. As a group leading discussion, you might consider any of the following additions to your discussion plan:

- You might design some sort of interactive activity for the class to undertake based on the case.
- If during the course of your background research, you come across are short or audio clips (<5 min. total) that would be appropriate to share with the class, you may show us these during class. I recommend including these as links in your PowerPoint slides.
- You may provide a handout for the class if you wish. *I can arrange to make copies of this to pass out if it is provided to me before 3 pm on the day of class.*

Discussion Leadership will be evaluated on the following four (4) criteria, for which excellent performance is specified below. See also the Rubric available in the D2L Dropbox for Discussion Leadership, as well as the document "Tips on Leading Class Discussions," produced by the Carleton College History Department. A Group Dropbox for submitting Discussion Leadership questions and slides are on D2L.

Discussion Questions: Excellent discussion questions are well-phrased (and were clearly stated during class), clear and concise. Questions that provoke interesting discussion open-ended, ask students to reflect on the case in a specific way (i.e., using a framework or other concept from class), are able to seamlessly blend the case, course material, and individuals' prior experiences. Consider asking questions about ethical or value laden issues in the case, about the assumptions various actors appear to be making, about the feedback loops or specific complexities of the human-environment interactions on display, about the business opportunities available, or other integrated questions. Avoid asking either-or or yes-no questions (sustainability issues are rarely dualisms like these).

Slides & Background Research: An excellent slide presentation provides high-quality background information on the actors (companies, individuals, stakeholders) and an analysis of the environmental and social issues in the case. This information is all cited as appropriate and well-organized on slides that have a good balance of short bullet points and appropriate images.

Discussion Leadership: Excellent discussion leadership is defined as a group that skillfully leads class in a sophisticated and wide-ranging discussion that integrated the assigned case material with other readings and discussions we've had class. The group asked poignant questions that elicited thoughtful responses from the class, and in asking questions allowed sufficient pauses after asking questions to allow class to think. Class discussion was not dominated by the leading team, but many students in class participated.

Full Participation of All Group Members: All group members should participate equally in discussion leadership during class as well as pre-class discussion preparation as reported by group mates.

Papers # 1 and # 2: *100 pts each, due Fridays Week 4 and Week 7 via D2L Dropbox*

In order to practice applying the theories and frameworks of sustainability we learn in class (planetary boundaries, social foundations, etc.), you'll write two (2) short papers (~1,000 words each) that aim to evaluate the actual sustainability of a supposedly 'sustainable' solution of your choice. For this paper, you should choose a topic that is *different from your MSSM project topic.* I suggest you choose something as specific as possible – e.g., a particularly innovative product claiming to be sustainable or a purportedly 'sustainable' solution (something marketed as contributing to sustainability somehow) that you're interested in evaluating using the perspectives and frameworks from this class. You will write both papers on the same solution.

Places to look for topics (in addition to the various companies and sustainable solutions mentioned the various readings) include:

- Sustainable Brands website (www.sustainablebrands.com), in particular their Library tab which has a rich set of slideshows and reports about a variety of corporate sustainability and sustainable solutions and topics.
- Sustainability and environmental news aggregators like *The Daily Climate* (www.dailyclimate.org) and *Inside Climate News* (https://insideclimatenews.org), which track news from around the web about environment- and climate change-related problems and solutions
- The blog *Seeds of Good Anthropocenes* (https://goodanthropocenes.net), which has positive stories from around the web of initiatives contributing to sustainability
- The United Nations' Sustainable Development Knowledge Platform (https://sustainabledevelopment.un.org), which sorts global sustainability issues, news and progress according to the 17 Sustainable Development Goals (SDGs)
- All around you – sustainable and environmentally-friendly branding is everywhere these days, from the shelves of Whole Foods to commercials for electric vehicles before YouTube videos.

When you think you've chosen a topic, please email me to verify with a couple sentences of detail it will work for these short papers.

Paper # 1: Once you've chosen a topic, the first paper you write will evaluate the extent to which the product or solution contributes to sustainability a la Rockström & Klum (2015), that is, living within the planetary boundaries and meeting the social foundations. You will not

explore all of the boundaries and foundations in 1,000 words, but you should explore a couple of each and will likely have to do a bit of internet research to do so.

Paper # 2: In the second paper, you will explore the social structures (aka, strategies, rules, institutions) and feedback loops surrounding the sustainability problem or issue that your solution was trying to solve (or the social structures of the solution itself, depending on what exactly you identify and work on). This paper will not involve any new research per se, but will rather allow you to brainstorm and workshop a hypothetical set of social structures for your topic, as well as how you might change these social structures and feedbacks to make the solution more truly sustainable according to the sustainable frameworks we'll explored in this class.

Generous Debate: *50 pts, in-class activity during Weeks 8 and 10*

This debate-like activity will aim to build your sustainability science communication and advocacy skills, including developing skills of generous listening, dialogue interviews, and more. More information will be provided during class in Weeks 7 and 8, including time to work in groups in class in Week 8, and the final 'debate' will take place in class in Week 10.

***PathFinder* Journaling:** *50 pts, due in class Week 9*

The *PathFinder* notebook is part of your journey through the MSSM program and the journaling activities therein will help prepare you for the project pre-work in this and other classes in the MSSM curriculum. For ENV 506, you'll focus on the Begin and Explore sections of the *PathFinder* journal, from the perspective of sustainable human-environment interactions. The complete set of questions you'll respond to for the *PathFinder* journaling assignment are available on D2L.

Final Paper for your MSSM Project & Portfolio: *300 pts total, Outline & Bibliography due Friday Week 8, Final Paper due Wednesday of Finals Week via D2L Dropbox*

The cumulative assessment for this course is a 3,000-5,000-word paper (excluding literature cited; see "Assignment Formatting" below for additional details) exploring the themes (environmental limits, human needs, social structures, and sustainable strategies) and Core Premises (see p. 2 Syllabus) of this course as they relate to your MSSM Project. You do not need to discuss all of the topics, key terms, frameworks, etc. for your Project, and we'll have time to workshop in class those frames that might be most useful to each individual student. You will also draw up a Paper Outline as well as an Annotated Bibliography (list of sources you plan to consult with a 2-3 sentence description for each source of how it might be useful) that I'll review and thereby provide guidance about the structure of your paper and the key ideas from this course you might consider.

All students will informally present their Final Paper during the Finals week meeting on Monday Mar 15 from 6:00-8:15 pm. The Final Paper is due Wednesday of Finals Week via D2L Dropbox.

Assignment Formatting

All written assignments should be formatted in a standard font (Calibri, Cambria, Times, Helvetica, Arial, etc.) at ***11 pt size***, with ***1.1 or 1.15 spacing*** and ***1" margins*** on all sides. Your document should have your last name and page numbers in the upper right header space (e.g., "Vogt 1" – use the auto-page numbering feature available in most word processors), and the class number and the title of the assignment in the upper left header space (e.g., "ENV 506 Paper # 1"). Nothing should appear in the footer space of each page. Please provide a topically-appropriate descriptive title for the document in **bold** on the top of the first page (e.g., "Planetary boundaries and the Anthropocene epoch – Response to Readings"), with your full name appearing under the title in italics. There is no need to put a cover sheet on any document you turn in.

For assignments that are due via D2L Dropbox, you should submit files that are in either PDF (.pdf) or Microsoft Word (.docx) format, with ***PDF being the preferred format***. Other word processor formats (Pages, Google Docs, etc.) will under no circumstances be accepted. If you need assistance converting from one of these formats to Word or PDF, please let me know and I am happy to walk you through it.

Late Assignments

Late assignments will likely be accepted ***if you notify me in writing in advance of the due date.*** Typically, I am willing to negotiate extensions to students who ask courteously and respectfully.

Citations: ***You really, really, really ought to read this section!!!*** ☺

For all written work completed for this class (including Reading Responses, Papers # 1 and # 2, and the Final Paper), you should be sure to consult sources (reading material assigned for this class or additional sources you find on your own) and to properly cite these sources in your written work. I've provided a "Citations" document on D2L (Content >> Major Assignment Information), which contains some basic, partial information for a few common types of scientific sources, but is not an all-inclusive reference for how to properly cite all sources you might encounter for this course. If you've used MLA format in classes before, be advised that *MLA is not a proper citation formatting system for scientific purposes.* I recommend either using APA or Chicago style. The Purdue OWL website (https://owl.english.purdue.edu/owl/) is an excellent reference for how to properly cite sources if you're new to this.

Please, please, please do not use an online citation generator. I have never yet seen one be used effectively. If you're in the market for a citation management software, something like Endnote or Mendeley works very well and does provide the copy-paste functionality that online citation generators lack, but recognize that these citation management softwares still require the user (you) to enter all the information for a source properly before their copy-paste functions will work accurately. ***Be warned, incorrect in-text citations or improper Literature Cited references are major pet peeves of mine, but I am more than happy to help you learn how to properly cite sources if you're new to this game.*** It's a relatively easy to memorize and terrifically valuable skill.

ADDITIONAL CLASSROOM POLICIES

Minimum Technology Policy:

Because participation and engagement with one another is so important, I prefer not to have any technology – laptops, tablets, phones, etc. - in the classroom (unless I specifically ask you in advance to bring an internet-enabled device to class).

Here's why:

Studies have shown that allowing technology in the classroom is distracting and results in decreased student learning. Although we may think we are effectively "multitasking" when you're simultaneously using multiple applications on our computers (or when you're listening to class discussion and checking your email), you cannot truly do more than one thing at once. At best, "multitasking" results in what is called "fast switching," or rapidly moving between separate activities, where at any instant all of your brain is only focused on one of the activities. Take it from Adam Gazzaley, MD, Ph.D., a professor of neuroscience at University of California, San Francisco (from his TED talk, www.youtube.com/watch?v=tiANn5PZ4BI):

"With each switch, there is a time delay, and this leads to a cost and an impact on performance. You do not do two things as well as you do one thing, if you switch back and forth between them."

Technology is a type of distraction and interference that impairs long-term and short-term memory, and, ultimately, learning. ***For these reasons and others, technology – computers/laptops, tablets, cell phones, etc. – are discouraged in the classroom*** when not specifically asked for. With these distractions at a minimum, we will be able to more fully engage in the class, with each other and with the readings in class discussions and activities.

Email Etiquette:

I would prefer that you use email communication for all class business. This way, we all have a record of communications (and so I will remember when I agreed to meet with you, etc.! ☺). Please practice the following email etiquette, which you might find useful not just in this class, but in all your email communications.

- Use a short but descriptive subject line. ***Something more than just "ENV 506" is crucial.***
- Continue conversations about the same topic or question in the same email thread by *replying* to the email rather than creating a new message.
- Emails should be as brief as possible but also include sufficient information for me to know what you're asking.
- **See emailcharter.org** for more suggestions on email etiquette to help keep our inboxes manageable.

Online Teaching Evaluations:

Instructor and course evaluations provide valuable feedback that can improve teaching and learning. The greater the level of participation, the more useful the results. As students, you are in the unique position to view the instructor over time. Your comments about what works and what doesn't can help faculty build on the elements of the course that are strong and improve those that are weak. Isolated comments from students and instructors' peers may also be helpful, but evaluation results based on high response rates may be statistically reliable. As you experience this course and material, think about how your learning is impacted.

Your honest opinions about your experience in and commitment to the course and your learning may help improve some components of the course for the next group of students. Positive comments also show the department chairs and college deans the commitment of instructors to the university and teaching evaluation results are one component used in annual performance reviews (including salary raises and promotion/tenure). The evaluation of the instructor and course provides you an opportunity to make your voice heard on an important issue – the quality of teaching at DePaul. ***Don't miss this opportunity to provide feedback*.**

Academic Integrity:

DePaul University is a learning community that fosters the pursuit of knowledge and the transmission of ideas within a context that emphasizes a sense of responsibility for oneself, for others and for society at large. Violations of academic integrity, in any of their forms, are, therefore, detrimental to the values of DePaul, to the students' own development as responsible members of society, and to the pursuit of knowledge and the transmission of ideas. Violations include but are not limited to the following categories: cheating; plagiarism; fabrication; falsification or sabotage of research data; destruction or misuse of the university's academic resources; alteration or falsification of academic records; and academic misconduct. Conduct that is punishable under the Academic Integrity Policy could result in additional disciplinary actions by other university officials and possible civil or criminal prosecution. Please refer to your Student Handbook or visit Academic Integrity at DePaul University (academicintegrity.depaul.edu) for further details.

Students with Disabilities:

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling you to access accommodations and support services to assist your success. There are two office locations:

- Loop Campus – Lewis Center #1420 – (312) 362-8002
- Lincoln Park Campus – Student Center #370 – (773) 325-1677

Students are also invited to contact me privately to discuss your challenges and how I may assist in facilitating the accommodations you will use in this course. This is best done early in the quarter and our conversation will remain confidential.

Writing Center:

I strongly recommend you make use of the Writing Center throughout your time at DePaul. The Writing Center provides free peer writing tutoring for DePaul students, faculty, staff, and alumni. Tutors work with writers at all stages of the writing process, from invention to revision, and they are trained to identify recurring issues in your writing as well as address any specific questions or areas that you want to talk about. Visit www.depaul.edu/writing for more information.

Dean of Students Office:

The Dean of Students Office (DOS) helps students in navigating the university, particularly during difficult situations, such as personal, financial, medical, and/or family crises. Absence Notifications to faculty, Late Withdrawals, and Community Resource Referrals, support students both in and outside of the classroom. Additionally, they have resources and programs to support health and wellness, violence prevention, substance abuse and drug prevention, and LGBTQ student services. The Office is committed to your success as a DePaul student. Please feel free to contact them at studentaffairs.depaul.edu/dos.

ENV 506 – Earth Resources & Human Society
CALENDAR – Winter 2017

Readings assigned for class each day is listed here.

This printed list is provided at the beginning of the quarter as a convenience only. Please refer to D2L during the quarter for up-to-date information, deadlines, etc., and email me with any questions.

ENVIRONMENTAL LIMITS

JAN 2 (WEEK 1)

Page 1-55 (Preface to ch. 1) in: Rockström, J. & Klum, M., 2015. Big World Small Planet: Abundance Within Planetary Boundaries, New Haven, CT: Yale. *(Hereafter: Rockström & Klum 2015)*

Week 1 Reading Response due in class Monday evening, turn in printed copy

JAN 9 (WEEK 2)

Rockström & Klum (2015) p. 59-111 (thru ch. 4)

Waters, C.N. et al., 2016. The Anthropocene is functionally and stratigraphically distinct from the Holocene. *Science*, 351(6269), p.aad2622-aad2622.

Week 2 Reading Response due in class Monday evening, turn in printed copy

MLK DAY – NO CLASS – JAN 16 (WEEK 3)

JAN 23 (WEEK 4)

Rockström & Klum (2015) p. 114-179 (thru ch. 8)

Chapters 1-4 in: Senge, P. et al., 2010. The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World, New York: Crown Publishing. *(Hereafter Senge et al. 2010)*

United Nations Open Working Group (2015) *Sustainable Development Goals*

Human-Environment Case # 1 re: sustainable consumption & product design, "cradle-to-cradle" and Herman Miller: Rossi, M. et al., 2006. Design for the Next Generation Incorporating Cradle-to-Cradle Design into Herman Miller Products. *Journal of Industrial Ecology*, 10(4), pp.193–210.

Week 4 Reading Response due in class Monday evening, turn in printed copy

Paper # 1 due via D2L Dropbox, Friday Jan 27

SOCIAL SYSTEMS & STRUCTURES

JAN 30 (WEEK 5)

Chapter 3 in: Steinberg, P.F., 2015. Who Rules the Earth? How social rules shape our planet and our lives, Oxford, UK: Oxford University Press. *(Hereafter: Steinberg 2015)*

Senge et al. (2010) ch. 5 & 8

***Human-Environment Case # 2* re: Water and Coca Cola-WWF Partnership:** Senge et al. (2010) ch. 7; also browse the WWF-Coca-Cola Partnership website: http://www.worldwildlife.org/partnerships/coca-cola

***Human-Environment Case # 3* re: Energy and Materials and the U.S. Green Building Council (USGBC):** Senge *et al.* (2010) ch. 6 – *note that Steinberg (2015) ch. 3 also discusses the USGBC*

Week 5 Reading Response due in class Monday evening, turn in printed copy

FEB 6 (WEEK 6)

Senge et al. (2010) ch. 11-13

Ostrom (2005) ch. 2

***Human-Environment Case # 4* re: sustainable palm oil & supply chains:**

Newton, P., Agrawal, A. & Wollenberg, L., 2013. Enhancing the sustainability of commodity supply chains in tropical forest and agricultural landscapes. *Global Environmental Change*, 23(6), pp.1761–1772.

Harrison, A. et al., 2016. *Palm Oil Buyers Scorecard: Measuring the Progress of Palm Oil Buyers*, WWF – Wofld Wide Fund for Nature. Gland, Switzerland.

Week 6 Reading Response due in class Monday evening, turn in printed copy

FEB 13 (WEEK 7)

Senge et al. (2010) ch. 14

Dangerman, A.T.C.J. & Schellnhuber, H.J., 2013. Energy systems transformation. *PNAS*, 110(7), pp.E549-58.

Ostrom TBD (will be posted by Jan 16 to D2L)

Steinberg (2015) ch. 5

Human-Environment Case # 5: TBD (will be posted by Jan 9 on D2L)

Week 7 Reading Response due in class Monday evening, turn in printed copy

Paper # 2 due via D2L Dropbox, Friday Feb 17

SYNTHESIZING STRATEGIES & SOLUTIONS

FEB 20 (WEEK 8)

Senge et al. (2010) ch. 15-18

Cash, D.W. et al., 2006. Scale and Cross-Scale Dynamics: Governance and Information in a Multilevel World. *Ecology & Society*, 11(2), art. 8, 12pp.

Liu, J. et al., 2007. Coupled human and natural systems. *Ambio*, 36(8), pp.639–649.

Pages 52-72 in: Matson, P., Clark, W.C. & Andersson, K., 2016. *Pursuing sustainability: A guide to the science and practice*, Princeton, NJ: Princeton University Press.

Pages 1-28 in: Nahser, R., 2015, **The Corporantes *PathFinder* Lab Journal: Vincentian Pragmatism—Systemic change in an Era of Sustainability***,* Evanston, IL: Corporantes, Inc. Chicago, IL: DePaul University Institute for Business and Professional Ethics. *(Hereafter:* PathFinder *journal)*

In class: Time to prepare for Generous Debate activity to occur week 10

Week 8 Reading Response due in class Monday evening, turn in printed copy

Final Paper Outline and Annotated Bibliography due via D2L Dropbox, Friday Feb 24

FEB 27 (WEEK 9)

Senge et al. (2010) ch. 9-10

Bashir, N.Y. et al., 2013. The ironic impact of activists: Negative stereotypes reduce social change influence. *European Journal of Social Psychology*, 43(7), pp.614–626.

Senge et al. (2010) ch. 21-24

Chapter 8 in: Gilding, P., 2011. *The Great Disruption: Why the climate crisis will bring on the end of shopping and the birth of a new world*, New York, NY: Bloomsbury Press.

PathFinder p. 29-44

Optional: Senge et al. (2010) ch. 25-28

Week 9 Reading Response due in class Monday evening, turn in printed copy

PathFinder *journaling due in class Monday evening, turn in printed copy*

MAR 6 (WEEK 10)

Senge et al. (2010) ch. 19-20

Rockström & Klum (2015) p.181-195 (finish book)

Steinberg (2015) ch. 9

O'Neill, D.W., 2012. Measuring progress in the degrowth transition to a steady state economy. *Ecological Economics*, 84, pp.221–231.

In class: Generous Debate activity

Week 10 Reading Response due in class Monday evening, turn in printed copy

MAR 13 – *Finals week meeting from 6:00-8:15 pm*

No assigned reading – informal Final Paper presentations during class time

Final Paper due via D2L Dropbox, Wednesday Mar 15