ENV 506 – Sustainability Science
SYLLABUS – Winter 2019

Professor: Dr. Jess Vogt – Please call me “Jess”
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Cell: (920) 850-2016 – OK to text, call, leave voicemails here; this is my only phone number
Office: McGowan South 203 G
Office Hours: See Communication Philosophy below
Class: Wed 6:00-9:00 pm / McGowan South 204 (second floor conference room)

ABOUT THE PROFESSOR
Dr. Jess Vogt is an Assistant Professor in the Department of Environmental Science & Studies at DePaul University. She teaches courses in sustainability science, urban forestry, and mixed methods research. She has a Ph.D. in Environmental Science, a Master’s of Public Affairs in Sustainability, and a M.S. in Environmental Science, all from the School of Public and Environmental Affairs at Indiana University. Jess is active in the urban forestry professional community, serving as an Associate Editor for the journal *Urban Forestry & Urban Greening*, as Director of Research for the Illinois Arborist Association, and Vice Chair of the Science & Research Committee of the International Society of Arboriculture. She was awarded the 2018 International Society of Arboriculture Awards of Distinction Early-Career Scientist Award. In August of 2018, Jess spent a month in Zhengzhou, China, as a Visiting Foreign Expert in the International Lab of Henan Provincial Landscape Architecture at Henan Agricultural University.

At DePaul, Jess runs LUFA, the Lab for Urban Forestry in the Anthropocene. LUFA does research at the intersection of urban forestry and sustainability science, examining how trees and urban greening activities can make cities more ecologically sustainable as well as livable for people. You can find more information about LUFA research as well as opportunities for students on our website: www.lufa-depaul.org.

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

- Most Tuesdays, Wednesdays, and Thursdays between 9 am and 4:30 pm, I am in my office (203 G). During these hours, my door is always open to you. Please feel free to stop by to ask questions about this class, with BA or M.S. ENV advising issues, or even just to chat.
- Mondays and Fridays are my research/writing days, during which I will be writing either from home, a coffeeshop, or sometimes my office. If you need to get a hold of me on these days, you can try email, but it might be better to call or text if you want/need a quick reply, as I often spend large amounts of time off email while I’m writing.
- 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 aims to orient students to the problems of the ‘Anthropocene’ – a new geologic epoch characterized by climate change, increasing human population, pollution of air, water and soil, overuse of natural resources, and underserving of human needs. This course will help students think about solutions to these challenges through the discipline of ‘sustainability science,’ and build ‘systems thinking’ skills.

### Learning Outcomes

1. **Understand** how human impact on the environment is causing the Anthropocene.
2. Begin to be able to **design** new rules and strategies for the Anthropocene.
3. **Apply** the ‘limits and needs’ definition of sustainability in premise B.
4. **Utilize** systems thinking in real-world applications.
5. **Search for and evaluate** the best available science on sustainability for any topic, issue, or problem you may encounter.
6. **Assess** the scientists’ disciplinary frame and consider the impact this frame might have on the science and/or the perspective in the text (written or otherwise).
7. **Work together**.
8. **Distinguish** between issues of a normative versus positive nature as they apply to questions and problems of sustainability science.
9. **Reflect** on these positive and normative elements of sustainability in light of your own values, interests, strengths, weaknesses, passions, etc.
10. **Connect** what you want to do and create in the world (*i.e.*, your **vocation**) with premises A through D and all of the above learning outcomes.
11. **Situate** your vocation and your self in the context of global sustainability trends (human impacts on Earth’s biophysical limits and the needs of current and future generations of people) and movements happening right now (the UN Sustainable Development Goals, the New Urban Agenda, implementation of the Paris Agreement, etc.).

### Core Premise

A: The Earth is in a new geologic epoch (the ‘Anthropocene’) and therefore the ‘old rules’ (*i.e.*, strategies) humanity has been using to guide human-environment interactions throughout the Holocene can no longer work.

B: Sustainability can be defined as living within Earth’s biophysical limits (*i.e.*, ‘planetary boundaries’) while meeting human needs (*i.e.*, ‘social foundations’) for current and future generations. This definition is consistent with a ‘systems thinking’ conceptualizations of sustainability.

C: Sustainability is an interdisciplinary (and multi- and trans-disciplinary) field of science and practice requiring of its professionals a basic understanding of the scientific method of inquiry and a willingness and ability to collaborate effectively with a diverse group of actors.

D: Sustainability science involves both the objective gathering of scientific facts about the state of our planet and its resources, ecosystems, and people (*i.e.*, ‘positive’ inquiries), as well as more subjective discussions about what actions we should take, what value judgements we should make, etc. (*i.e.*, ‘normative’ inquiries). The UN Sustainable Development Goals are an example of this.

E: Individuals and organizations in all sectors can generate sustainable strategies and solutions to the multidimensional sustainability challenges of biophysical limits and human needs in the Anthropocene through aspirational thinking, innovation, and creativity.

### Course Objective

By the end of this course, students will be able to transform their knowledge and understanding of Earth’s biophysical planetary limits and society’s human needs in the context of the environmental and social systems in which we live into opportunities for aspirational, creative, and innovative strategies and solutions for a sustainable world where humans and the environment flourish.
COURSE MATERIALS

Required Books:

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, relevant news items, etc. All additional required content will be posted in PDF form or hyperlinked from D2L in Content >> Weekly Reading Schedule.

A note about assigned scientific articles: We will be reading a lot of scientific literature in this class. If you develop a method to become comfortable reading and annotating scientific papers as soon as you can, the reading for the quarter will be much easier. You might print the articles and heavily annotate (underline + notes in the margins or on post-its) the paper copies, or read electronically and take notes in a Word document, or use a PDF annotating software to read and take notes electronically, or any other method of closely reading and taking notes on each article so that you’re prepared for in-class discussions and activities. On the first day of class, I’ll pass out a short article as well as a document containing some tips for reading scientific papers (and post to D2L in Content >> Writing, Reading, Citing, Speaking Tips).

D2L:
The D2L site for this class will be the way we organize course materials (Content tab) and how you turn in select assignments (Submissions tab). In addition, I may post class announcements (Home tab) and relevant news articles (Discussions tab) and use D2L to send course-related emails. Login to d2l.depaul.edu and click on this ENV 506 class for more details.

COURSE EVALUATION

Final Grade:
Your final grade in this course will be based on the following. There is no in-class final exam. No extra credit is available.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>Points</th>
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<tbody>
<tr>
<td>Preparation – Weekly Reading Responses – bring to class &amp; turn in paper copy each week</td>
<td>150</td>
</tr>
<tr>
<td>Participation – In class discussion and activities</td>
<td>150</td>
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**Major Assignments**

- Planetary Boundaries Paper & Presentation – in pairs, due Week 3 150
- Group Discussion Leadership – in small groups, during class Weeks 6-9 100
- Evaluation Paper – individual, due Week 7 via D2L Submissions 100
- Reflective Journaling – due Week 9 via D2L Submissions 50
- Final Paper (on your chosen topic) 100
  - Outline & Annotated Bibliography – Due Week 8 via D2L Submissions 100
  - Final Paper – Due via D2L Submissions, during scheduled final exam period 200

**TOTAL** 1000

**Point Scale**: The following point scale will be used to assign letter grades with no exceptions: 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: a mix of chapters from one or more of the assigned textbooks 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 (max. of a single piece of paper)

**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/author(s) can be considered a single ‘text’ for the purposes of your response.) Reading Responses should be typed, printed and handed in to me at the end of each class.

You might reflect on (not an inclusive list – just some ideas to get you started):
- 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; points you didn't understand or would like to discuss more in class;
- Consideration of the readings in relation to the Core Premises of this course (see the figure on page 2 of this Syllabus);
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 30 minutes after completing the readings.

**Participation: 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.

*I did not invent this concept and don’t know who did, but I think it’s wonderful.

**Major Assignments: 700 points in total, due at class time the week specified, via D2L submissions**

In addition to coming prepared to and participating in class, you will be required to complete several additional assignments, both in groups and individually. Additional details on each assignment will be provided in class when the assignment is introduced and also made available in Content >> Major Assignments in D2L.

**Organizing for Group Assignments: Zoom**

As DePaul students, you have free access to the Zoom teleconferencing tool. It’s a wonderful way to arrange group meetings. It allows not only video conferencing using a web browser or mobile device with the standard screen sharing features, muting and unmuting of individuals who might have lots of background noise, etc., but also allows people who might be offline to call in to join the conference with only audio using a regular phone. It’s a great way to arrange “face-to-face” group meetings, when you can’t all physically be in the same place at the same time. Go to https://depaul.zoom.us and sign in with your Campus Connect login to get started.
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 Planetary Boundaries Paper”). Nothing should appear in the footer space of each page. Please provide a topic-appropriate descriptive title for the document in **bold** on the top of the first page (e.g., “Week 3 – 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 Submissions, 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 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 >> Writing, Reading, Citing, Speaking Tips), 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/](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, why you’re missing class on a particular date, 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](http://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.