Applied Sustainability  
(420.669.91.SU20)  
Summer 2020

Instructor  
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Course description

This course is part of Johns Hopkins Krieger School of Arts and Sciences (KSAS), Advanced Academic Programs (AAP) in the Environmental Sciences and Policy Program (ESP). The course surveys the history and current trends in the expanding field of sustainability science from a variety of perspectives, including government, business, academia and agriculture. We will investigate the environmental, socioeconomic and cultural elements that created current conditions and trends, and a wide range of case studies in sustainable resource management will be presented through visits to field sites and discussions with sustainability practitioners. Topics will include sustainability measurement and tracking, various forms of sustainability technology, resource use, living systems, systems thinking to trace and solve problems, and the interconnectivity of sustainability problems. The course will also consider the role of human behavior in overcoming impediments to progress. Student work includes assigned readings, maintaining a journal, preparation/delivery of a 60 minute student-led learning session during the field experience, a small group visioning project on some aspect of sustainability and a systems thinking exercise to identify key leverage points that would lead to sustainable human activity. In addition to this work, students will also be evaluated based on class participation.

Course prerequisites

There are no prerequisites. However, it is recommended that the student offset their carbon from travel to and from Baltimore.

Course Learning Objectives

Upon successfully completing this course, students will:
1. Be familiar with the definitions, history and current trends of sustainability.
2. Have familiarity with assessment tools being used to measure sustainability.
3. Understand the various components of sustainability and issues and solutions associated with each.
4. Know about prevalent and cutting-edge sustainability activities in Maryland and elsewhere by government, business, academia and individuals.
5. Become familiar with social and behavioral challenges associated with sustainability as well as techniques that are effective in achieving goals and creating solutions.

Core concepts for Applied Sustainability that will be referred to and reinforced during the course to increase your long-term retention include:

**Think. Outside.** – Collaborative, transformative and creative thinking are key to finding durable sustainability solutions, as is finding and incorporating existing examples of positive deviance.

**Stick the landing** – Good planning and knowing where you want to end up are keys to successful implementation of sustainability projects.

**It’s all connected and important** – Effective, enduring progress on sustainability requires holistic consideration of relationships and interconnectedness of both issues and people.

**Create the conditions** – A hidden secret to successful sustainability efforts is establishing an environment where success is more likely.

**Fix the right problem** - Too often we don’t focus on the root causes of problems and may even make the problem worse.

**Course Materials**

**Textbook**
There is no required textbook for this course but readings will be provided on Blackboard in pdf format or via links.

**Additional Readings**
Titles for additional, optional readings may be posted on the online classroom in Blackboard with support from JHU E-reserves.

**Required equipment for the field experience**
None.

**Specific Technology Requirements & Skills for this Course**
For the online portion of this course, at a minimum, you need to be able to navigate in and use Blackboard; see the Blackboard Student Orientation course on your “My Institution” page.

**Course Overview and Goals**

The overall goal of this class is to become more aware of and excited about successful efforts that are going on around us to create a sustainable human presence, while coming to terms with the deep challenges that humanity faces in this endeavor. As part of our experience, we will also focus on what we as individuals can do, including locally grown food as much as possible.

**Course format**
This course will be taught in a hybrid format that consists of online readings, journaling, lectures, student-led learning, discussions, group activities, field experiences and meetings with sustainability practitioners. The course will make use of audiovisuals such as videos and power point presentations, but a primary feature of the course will be hands-on experiences such as site
visits. The bulk of the course will be taught off campus at a location near Thurmont, Maryland (ThorpeWood), with food and lodging provided. However, there will be online components both before and after the field experience.

The online portion of the course will commence on 27 May, and the capstone field trip will convene at JHU Homewood campus on the morning of Friday June 19 and will return on Sunday June 28. NOTE: Students will also have the option of spending the evening of June 18 at ThorpeWood. The last day of the course will be August 18.

**What to Expect in this Course**
This course is 12 weeks in length, with online work before and after the 10 day field experience. During the capstone field trip, the daily agenda will vary and circumstances (e.g., weather, speaker availability, when dinner is ready, etc.) may dictate that we make last minute changes. However, you should expect days to be extended in length (but fun and memorable!) with little time for formally working on other activities (such as an urgent work project or another class). Access to the internet is also somewhat limited at ThorpeWood. Accordingly, if you taking another class during this time, please make arrangements in advance with your professor to either turn in assignments before or after the field experience so that you minimize your stress and are able to fully immerse yourself in the field experience. If you run into resistance, you may need to politely point out that the established policy of AAP is to encourage students to take courses with field experiences. And know that if you are taking another class during the summer, I will extend that same courtesy on deadlines, etc.

Based on student feedback from the 3 prior times I have taught this course, my own expectation for this course is that you not only find the information and experience highly valuable, you also make many new friends, expand your professional network and truly appreciate the beauty of our home-base surroundings and many of the places we visit. Most students also truly enjoy our focus on locally grown food and shared preparation of many meals.

**Course field trip specifics:**
This course will take place off campus, and during this extended deployment food and lodging will be provided (with the exception of lunch the first day). We will stay at ThorpeWood, a non-profit organization in Frederick county Maryland. You will have the option of staying in a cabin or tent camping nearby. You will also have some free time to explore this beautiful location. We will also periodically ask for your help in food preparation/cooking/clean up.

The daily activities during the field trip will vary in intensity and type. On average, there will be about 2 hours of lecture each day, and 5 hours of field experiences each day. Additional activities will include group discussions (some by campfire), student project presentations, and several videos.

**Assessments and Grading Policy**

**Course assignments**
The assignments for this course will consist of: preparation and online submittal of an
introductory ‘bio’ to introduce yourself to fellow students, weekly required readings and
associated online posting, maintenance of a journal, preparation/delivery of a 60 minute
(maximum) lesson on a sustainability topic during the field experience, a small-group visioning
exercise and presentation of results during the field experience, and a small-group systems
thinking exercise after the field experience.

As part of the required readings assignment, students will bring a very recent media article on the
field trip related to a sustainability break-through- this article will be presented by the student for
discussion at an evening campfire.

Because of the hybrid format for this course, on-line work and reading assignments are included
to maximize learning and assimilation of the material. Readings and short journal entries will
occur throughout the course, while the timing of other assignments will vary. Student bios will
be submitted during the first week, and preparation of the student-led learning exercise will
occur during the first 3 weeks of the course. The visioning project/presentation will take place
entirely during the field experience, and the systems thinking exercise will occur after the field
experience.

Course requirements
Your performance in this course will be evaluated in seven ways: participation in the self-
introduction, successful completion of online postings associated with required readings, your
journal, your Student-Led Learning presentation, your small group visioning project, your
paired systems thinking exercise and your participation during the 10 day field trip.

A) Posting of your introductory ‘bio’ and commenting on ‘bios’ submitted by other
students. You should prepare and post a free-form ‘bio’ about yourself, and then respond
to the posts of your fellow students. My expectation is that you participate fully in the
introduction process as this promotes much tighter group bonding and thus higher quality
learning.

B) Completion of weekly online reading assignments and submitting a post to the
associated discussion thread for that reading. For the online portions of the course, my
expectation is that you will complete the required readings and participate in the
discussion thread by posting your response to the prompt. You may also post responses to
the posts of other students, but that is optional. A note on your posts—I am looking for
your thoughts, not what you think I would want you to write.

C) Journal. Throughout the duration of the course, you will keep a journal. What you
decide to enter in the journal is up to you and I am decidedly not looking for a multi-
volume book, but the idea is for you to record important sustainability-related thoughts
and ideas as you hear or read them. Your journal is also a convenient place to record
thoughts about your systems thinking project such as your thought process for defining
the limits of the system, whether you felt that worked out or not, etc.

D) Student-led learning topic presentation. Students will select from a list of instructor-
provided sustainability topics and prepare/present that topic during a pre-scheduled time during the capstone trip. Presentation times will be not more than 60 minutes in length and interactive learning activities associated with the topic are highly encouraged.

E) **Visioning Project and Presentation.** During the capstone field experience, students will work in small groups to create a shared vision for some aspect of sustainability in the United States and present that vision to the class. The presentation will be up to 20 minutes long, with 5 minutes after each presentation for discussion and questions.

F) **Systems Thinking Exercise.** After the field experience is complete, you will partner with another student and conduct a systems thinking exercise on some aspect of sustainability to explore potential key leverage points that would lead to sustainable human activity.

G) **Class participation.** The level of engagement you put into this class will be a key determinant of your level of learning and academic success. My expectation is that you demonstrate fully empathetic listening while others are speaking and that you keep an open mind to the material being presented. I also encourage you to ask thoughtful, reflective questions so that we can collectively learn and grow as a group. Given the importance of the field experience, full attendance is necessary.

**STUDENT-LED LEARNING ASSIGNMENT GUIDANCE**

**Why we are doing this.** Educational researchers have found that mastery of core concepts from traditional lecture-based courses is consistently 30% or less. Further, meaningful learning only occurs when: there are conceptually clear resources, a learner’s prior knowledge is tapped into, and the learner makes an active choice to learn.

To improve your long-term retention and ability to use the most important points from this course, we are going to use a different approach than you may be used to for some of our learning journey in this class. The main thrust of this approach will be student-led learning, with references back to our core concepts (listed previously in this syllabus) to tie things together. In a nutshell, each of you will take a topic that you want to learn about (*more on that below*) and have a specified hour during our field experience to guide your fellow students in their learning. You will have lots of opportunity be creative, but I will provide a general framework, assistance and guidance along the way.

My goals for your Student-Led Learning are to:

- Provide you with valuable, front-of-the-room teaching experience in a friendly, supportive setting
- Increase peer-to-peer engagement and topic immersion
- Provide you with greater choice and creativity in how learning takes place, and
- Deliberately focus on relating our learning to core concepts to bring things together.
**Timeline.** Our semester for this course starts on May 27th and we will hit the ground running to give you sufficient time to prepare your assigned lesson. I will immediately start taking reservations for topics on a first-come, first served basis (see list below) and you need to make your selection and send it to me during the very first week of class. As much as we are able, lecture topics will occur in association with a related field experience. To ensure that you are on track with your preparation, you will arrange, at a mutually agreeable time, a ‘readiness chat’ with me during which you will go over your strategy and key features of your approach. All readiness chats need to be completed by June 10th at midnight, but you should feel free to consult me more frequently as you feel it necessary.

I also want to have a short group debriefing/feedback session near the end of our field experience to kind of pull everything together [time/day TBA].

**Topic Choices.** To get things started, each of you will select a topic from the list below and email me ASAP what your 1st, 2nd and 3rd choices for a topic are. If you really don’t care which topic you get, please let me know that as well. I will take requests in the order that I receive them, so if you really want to get your 1st choice, make a quick decision and send it my way via email to pkazyak1@jhu.edu. The topics are:

- **Infrastructure**
  
  Details to include: *in progress for all of these*

- **Energy/Energy storage**
  
  Details to include:

- **Human welfare**
  
  Details to include:

- **Economics of Sustainability**
  
  Details to include:

- **Climate Change**
  
  Details to include:
Biodiversity
  Details to include:

Waste
  Details to include:

Systems Thinking
  Details to include:

Toxic Substances
  Details to include:

Non-renewable Resources
  Details to include:

Soil and Water
  Details to include:

Human Carrying Capacity
  Details to include:

Ecosystem Services
  Details to include:

Foods System
  Details to include:
Evaluating your success (I know you will be successful!). The student-led learning assignment is worth 30% of your grade for the course (150 of 500 pts), and it is an opportunity to help your fellow students learn effectively, so my recommendation is to treat it as a cool professional opportunity rather than just another in a long list of godawful assignments that you complete as part of this program.

Your score for this assignment will be based on instructor score (1/2 weight) and 2 anonymous peers (1/2 weight of mean value from two of your peers) who will independently score the categories shown in the course grading section below. You will also have the opportunity to receive and also give specific feedback to each presenter during our debriefing so they can maximize learning from their experience.

Guidance. To help you with this task, I put together some thoughts on how I would approach this assignment, along with some guardrails to guide you:

1) Delve into the content, then brainstorm how students can best learn it

After you get your assignment of topic, I would recommend first re-reading the course objectives (see first page of the syllabus), looking at the details I want you to cover, and then highlighting which objectives could or will pertain to the content you will be presenting. Then, I would review the Core Concepts (see above) and keep those in mind throughout your preparations (maybe highlight the ones you see as directly relatable to your material, but keep an open mind as you may see more as you get into your topic). Next, I would see what reputable information is available that pertains to your content (section on using the JHU library below). There may also be videos that may be worth using, but keep in mind that internet access is limited. One thing to especially focus on as you prepare are the latest developments and trends pertaining to your topic. When you are comfortable that you have enough material to cover the content topics. I suggest brainstorming various ways you can effectively get your points across. What are your favorite in-person ways to learn? Least favorite? Cool stories, novel questions, novel approaches can all be highly effective in supporting learning. Finally, if you want to run ideas by a classmate to get some initial feedback, feel free to do so.

2) Make the length appropriate

For many, if not most, courses, the feeling that there is simply not enough time for learning the content is well founded. It can literally be like you are being fire-hosed with content- I am confident that we have all had that feeling of being overwhelmed. You and your classmates really don’t want that, so it becomes imperative to really focus on efficiently selecting and presenting content that relates to our Core Concepts and your subject area. In other words, if you could only tell a friend so much about the cutting edge of your topic, what all would you include? What background information would be necessary to provide?

Using biodiversity as a topic example, it would not be appropriate in this course to try and teach the class to identify all of the flora and fauna of Maryland, but you may decide that it would be
useful to show your classmates what some of the key biological players look like and describe how they interact with each other.

Although it is certain that we could spend many hours learning about your topic, your job will be to distill the material down to no more than 1 hour of contact time. This total would include any written and/or audiovisual lecture, video watching, discussions, etc. And if you feel confident that students can get what they need on your topic in less than an hour, I say that works for me and I am confident it will work for your fellow students.

3) **Say why and link to existing knowledge**

To begin with, I suggest that you explain to your audience why your specific topic is relevant to sustainability and therefore worth learning. Having this context should help strengthen the realized importance of and therefore retention of your material. And since we tend to learn best by associating new material with things we already know, you should think about ways to link your material to things most students are aware of. And don’t forget about our core concepts because reference back to them is important for long-term retention.

4) **Get people talking**

Social interaction and dialogue plays an essential role in development of cognition, so I recommend that you try to include this as a feature of your topic coverage. You might even want to ask students what they know or think they know about the topic before you start, or ask what they learned afterward. And encouraging students to ‘think out loud’ during discussions can help promote engaged dialogue from the rest of the class. I hope you will find a way generate real conversation and deeper learning- because that is what grad school should really be about. It’s not about checking boxes.

5) **Don’t be the only one talking**

Avoid “talk and tell” situations where the only thing that happens during your hour is you talk and they listen. There is an art to this, but keeping your voice in the background at least some of the time is a great way to promote better learning.

I am guessing that we’ve all had learning experiences that were magical, and some that were really bad. For your assignment here, why not shoot for some magical? You’ll do this by going the extra mile in terms of creativity, stimulating curiosity, critical thinking and comparisons/contrasts with thinking of peers, being a positive and energetic presence to your classmates, encouraging collaborative learning, and communicating effectively. You’ll think about giving discussion questions that are open-ended and exploratory to allow for reflection and integration. Some possible generic examples include:

- What questions arose for you as you watched the video [saw my presentation, etc.]?
- What did you learn that was a surprise?
- How did this topic connect to previous topics and why is this important?
- Do you have previous experience with or awareness of this topic?
6) Bring it all together

As an option, you may choose to summarize main points of learning and key links to Core Concepts at the end of your hour. Or, you might choose to have your classmates each contribute in some way to that summary.

Technical Stuff

Content for your instruction. As you select content resources for this teaching assignment, it makes sense to use the resources of the JHU Library. There may also be current events that pertain directly to your topic area, so it is good to keep news articles, etc., in mind as you prepare.

That being said, much of the content you will be presenting to your classmates will be on the technical side, so in general I would expect you to source your material from scientific journals, books that are in some ways peer reviewed and government agency websites. There may also be high quality videos about portions of your suite of content items from well-respected organizations such as National Geographic. For more on this whole process, the library staff graciously agreed to answer a series of ‘Frequently Asked Questions’ (that I made up).

FAQs for gathering content materials

1) I haven’t had stellar success with online searches in the past- is there an online help desk that I can use for specific questions?

Several options:

- Meet Your Librarians

Sharon Morris     Mike Houck

The best bet would be to send your question via [http://askdc.library.jhu.edu/ask](http://askdc.library.jhu.edu/ask)

- This form goes directly to us. One of us will get back to you as quickly as possible –

Through the same link, if your question is complex, we can also arrange a Zoom session with you for one-on-one demo and assistance.

2) Which databases are most likely to have relevant information pertaining to sustainability?

Suggestions: Use our [Earth & Environmental Science Guide](http://) for links to these suggested resources.
Note: Databases listed on the same line are similar.

- GREENR
- Scopus; Web of Science
- Georef; Geobase
- Academic Search Ultimate (formerly Academic Search Complete)
- Encyclopedia of Earth

Try: Open Education Resources Metafinder – Leads to government and educational resources on a topic

3) I want to consider using videos when I teach - what are sources of these types of educational videos?

We offer two streaming sources but frankly, you might do better with Youtube.

If you go Youtube, remember to evaluate the source. Here are some tips for evaluating Internet sources.

https://youtu.be/PLTOVoHbH5c

There are additional resources here: https://guides.library.jhu.edu/evaluate

The two streaming subscription sources are:

- Kanopy (help with clips)
• Docuseek2 (help with clips)
Both sources allow you to make clips. To make clips, you must create your own account within the source and log in. A link is created that will allow you to share.

4) How can I make my electronic searches for articles in academic databases more efficient and fruitful?

When using the databases,

• List your core key words
• Add synonyms to your keywords ex. Climate change or global warming
• Truncate terms (chem* to pick up alternate endings)
• Filter results using the categories provided by the databases - dates, subjects, peer reviewed, etc.
• Restrict core keywords to title, subject or abstract

Optional:

Watch these videos:

Constructing A Basic Search & Example Searching Academic Search Ultimate


5) How do I find books with materials related to my sustainability topic?

Use Catalyst - the online catalog found on the library’s homepage. http://library.jhu.edu

Type: sustainability

On next screen, try limiting words to subject by dropping down the Any Field menu and selecting subject
Use the filters on the left side of the screen to limit by dates, or format (online) if appropriate.

Browse the results!

You can add additional key terms – but remember books tend to provide overviews and discuss many aspects of a topic. Records for books contain just a few keywords so additional terms will have mixed results.

Think of terms (general and specific) such as:

biological OR chemical OR physical OR geology OR environmental OR ecology OR pollution OR sediments OR plankton OR hydrology OR conservation OR pests

If you are adding more terms, it might be best to do this as an Advanced Search in Catalyst and do a few words at a time.
Advanced Search

Field search

Any Field: biological OR chemical OR pests
Title:
Author:
Subject: great lakes north america
Numbers:
Publisher:
Series Title:
Call number:

Other attributes

Format: Select Some Options
Library Location: Select Some Options
Language: Select Some Options
Musical Instrumentation: Select Some Options
Publication Year: 2010 - 2019
VISION DEVELOPMENT PROJECT GUIDANCE

OBJECTIVE: To provide students with experience in vision development that relates directly to sustainability.

APPROACH: Using information sources of your choice, you and the other students in your small group will co-create a vision for some aspect of sustainability in the United States that you feel strongly about. Examples of areas you may choose to focus on include: food system, energy system, water system, healthcare, financial, toxics, climate, waste, stormwater management, ecosystem processes, biodiversity, etc., etc. As most of these challenges are interrelated in some way, I will leave the drawing of boundary lines to you. Your vision should include values, purpose and a picture of the future. The actual process used to develop the vision is up to you but should be documented in your presentation.

DELIVERABLE: The ‘deliverable’ for the vision session will be an oral presentation (15 minutes maximum, with 5 minutes for questions) to the rest of the class which includes: 1) The process you used, including whether and how you reached consensus, 2) a description of the challenges you faced, 3) the degree to which 1 or 2 participants shaped the vision, 4) the degree of change that may (or may not) have occurred during the process and 5) what the final vision was and how satisfied you are with it.

ADVICE:

1) First, spend a few minutes thinking about the worst problems related to what you want to fix and think about potential ways to get to a sustainable state. It’s good to think about why it is the way it is, and what ultimately needs to change.

2) Given the limited time-frame to complete this project, your group should recognize and adapt to the practical constraints. For example, you might choose to do some quick background reading on your chosen area and rapidly develop a straw-person vision to bounce off of your group, or you might just do a quick brainstorm on some things you might hope to see in a vision and work from them. Or your group might look online for examples of related visions that you like and adapt some of the key ideas for your vision.

3) Develop a plan of action and an agenda, write them down and stick to them. Make sure you get to an endpoint, even if you have to cut the discussion short to get there.

4) For your presentation, you don’t need to do bells and whistles, but it may help to have a drawing or two.
# Course grading:

Your grade will be calculated using the following point system:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>POINTS</th>
<th>(% of GRADE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Posting of your introductory ‘bio’ and commenting on ‘bios’ submitted by other students.</strong></td>
<td>25</td>
<td>(5%)</td>
</tr>
<tr>
<td>Bios will be graded based on timeliness (15pts for on-time posting) and response to other students (1 pt per response, 10 pts maximum).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Participation in weekly discussion threads for required reading</strong></td>
<td>75</td>
<td>(15%)</td>
</tr>
<tr>
<td>Participation in discussion threads will be graded based on timeliness (0-15pts); thoughtfulness and quality of response (0-60pts)</td>
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<tr>
<td><strong>3. Journal</strong></td>
<td>25</td>
<td>(5%)</td>
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<tr>
<td>Journals will be graded as follows: legibility/readability (0-5pts); extent of coverage (i.e., the degree to which entries include project thoughts, thoughts on required readings, entries about class activities, inclusion of external events related to sustainability) (0-5 pts); and quality of content/originality of thought (0-15pts).</td>
<td></td>
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<tr>
<td><strong>4. Student-Led Learning</strong></td>
<td>150</td>
<td>(30%)</td>
</tr>
<tr>
<td>a. Overall effectiveness of your approach <em>(25 pts)</em></td>
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<tr>
<td>(25 pts = Wow, that was so cool- this person could be teaching this class!; 15-19 pts = decent job but I was not captivated; 6-10 pts = I would have learned way more on my own; 0-5pts = this was really bad, no other way to say it)</td>
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<tr>
<td>b. Use of reputable materials to derive content <em>(25 pts)</em></td>
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<tr>
<td>(25 pts = solid use of published books and/or refereed journal articles and govt webpage material; 12-16 pts = some solid source material but some questionable; 5 or less pts = where did you get this stuff?)</td>
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<tr>
<td>c. Organization and use of materials (e.g., white board illustrations, video(s), powerpoint, etc.) <em>(20 pts)</em></td>
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<tr>
<td>(20 pts = whoa, that was so easy and straightforward, with great visuals- kudos!; 12-13 pts = generally easy, but some confusion; 8-11 pts = this was tough to get through, a definite struggle; &lt;8 pts = could not have been much worse)</td>
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<tr>
<td>d. Success in showing why topic is important and how it fits into the big picture of sustainability as well as Core Concepts <em>(10 pts)</em></td>
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<tr>
<td>(10 pts = I totally understand why the material is important to the big picture and policy/management; 8-9 pts = I felt like the material mostly has relevance; 5-7 pts =</td>
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</table>
there was little reference to why this stuff is important; <4 pts = zero reference back to why this is important)
e. Quality of resulting discussion/class interaction (15 pts)
   (15 pts = some really good learning and buzz going on this week; 10-12 pts = about half of the students are engaged with this material; <7 pts = no real buzz or engagement & many students seem to be doing the online version of snoring)
f. Degree of content 'stickyness' (how much you understand and will retain) (25 pts)
   (25 pts = I am pretty sure I will remember this in 10 yrs!; 14-17 pts = I will remember some really key points, but definitely not anywhere close to all of it; 10-12 pts = I might remember some of it but I am glad there is no final...; 9 pts or less = no chance of remembering, just going through the motions b/c it was pretty lame)
g. Success in relating new material to what you already knew (15 pts)
   (15 pts = awesome job at pointing out how this fits in to stuff we already know and to our core concepts; 8-9 pts = sometimes the connection with what I already know was made clear; 7 or less points = not much effort made to link my prior knowledge or any core concepts with this new stuff)
h. Your participation in evaluating fellow students (rating them using #s a to g and submitting your evaluation (15 pts)
   (15 pts = you evaluated the students I assigned to you; 0 pts = you didn’t)

5. Visioning Project 50 (10%)
Projects will be graded based on the presentations in class: clarity and power of presentation (0-10pts); degree of engagement with audience (e.g., eye contact, enthusiasm, delivery) (0-15pts); content (0-15pts), completed within time limit (0-5pts); and participation during Q&A periods for fellow classmates' presentations (0-5pts).

6. Systems Thinking Exercise 75 (15%)
After the field experience is complete, you will partner with another student and conduct a systems thinking exercise on some aspect of sustainability to explore potential key leverage points that would lead to sustainable human activity.

7. Class participation and engagement 100 (20%)
Participation will be graded as follows: degree of active engagement and reflective participation during class discussion sessions (0-50 pts); punctuality and participation in scheduled events (0-15 pts); courtesy to fellow students (0-15 pts); and attitude (0-20 pts).

Total = 500 points
The following grading scale will be used in this class (the JHU-AAP grading scale):

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>98–100%</td>
<td>A+</td>
</tr>
<tr>
<td>94–97%</td>
<td>A</td>
</tr>
<tr>
<td>90–93%</td>
<td>A-</td>
</tr>
</tbody>
</table>
88–89%  B+
84–87%  B
80–83%  B-
70–79%  C
<70%  F

More information about AAP grading policies can be found at [AAP grading policies](#).

What is the policy for late assignments?

I expect you to contact me in advance if you think you cannot meet an assignment deadline. However, if an assignment is late and prior arrangements have not been made with me, the assignment score will be zero. Don’t expect to get an exception.

Time Management Expectations

Because this is an intensive, graduate-level course, the rigor and time commitment is higher than an undergraduate course. I expect that you take time to understand the assignments and when they are due so that you can integrate all of this work into your schedule. Please seek help from me before becoming frustrated and spending a significant amount of time to resolve an issue.

Course Participation & Communication Policy

Course management

The on-line part of this course uses the Blackboard course management tool. If you are enrolled in this course you are automatically included in Blackboard for this course. You will need to use your JHED ID to log in. All assignments, readings, and capstone trip advice will be available through Blackboard. **Be sure to check Blackboard as soon as you register for the course.**

To provide you with a few days of additional time, the on-line portion of the course (including all reading assignments) will be made available prior to the start of the summer intercession, (May 27, 2020) through the Blackboard course site. There is no required textbook; readings will be provided on Blackboard in *pdf* format or as links. All readings and associated posts need be completed before the assigned due date as shown on Blackboard.

**NOTE:** All emails from me to you will use the JHU system. If you use a different email system, be sure to forward your JHU account to that other address.

Course etiquette

As JHU graduate students, each of you has proven your ability to master new material, some of which may have been in the form of using your short-term memory. In this course, I expect students to embrace and adopt and practice the concept of deep, internalized learning. So rather than formally testing your memory on concepts I consider important, we will pursue a
collaborative learning journey that requires your curiosity, a high level of engagement during all class activities and lots of courtesy and respect for your peers and instructors.

**Network Etiquette (i.e. “Netiquette”)**

In this course, online discussion will be primarily take place in our online discussion board. In all textual online communication, it important to follow proper rules of netiquette.

What is netiquette? Simply stated, it's network etiquette -- that is, the etiquette of cyberspace. And "etiquette" means the social and cultural norms of communicating with others in a proper and respectful way. In other words, netiquette is a set of rules for behaving and interacting properly online.

The Netiquette “Core Rules” linked below are a set of general guidelines for cyberspace behavior. They probably won't cover all situations, but they should give you some basic principles to use in communicating online.

For Netiquette Core Rules visit The Core Rules of Netiquette web page.

**Contacting the Instructor**

The instructor for this course is Paul Kazyak (pkazyak1@jhu.edu).

Feel free to contact me with comments, questions, and concerns. You will receive a response within 24-48 hours. All email messages will be sent to you via your JHU email account, so you should be in the habit of checking that account every day or you should ensure that your JHU email account forwards messages to another account of your choice.)

Professionalism is expected throughout this course whether in the online classroom or email. Your responses to questions, interaction/communications/emails with classmates or me should be professional in manner, and that includes responding in a timely manner.

**NOTE:** All emails from me to you will use the JHU system. If you use a different email system, be sure to forward your JHU account to that other address.

**Course Protocols & Getting Help**

**How will I know about changes to the course?** You will find new announcements about current course activities that you are working on and any changes to the course posted on Blackboard in the Announcements section, and every time I make an announcement it will also go out as an email to you. Please check announcements every time that you log into the course.

**How should I communicate with others in this course?** Communication for this course will primarily be face to face, during lectures and on the field trip. However, initial introductions will
happen online and you will make 7 posts related to the lectures and required readings. When you have a question about an assignment or a question about the course, please email me at pkazyak1@jhu.edu. Although I only guarantee a response within 24-48 hrs, it is very likely that I will respond more quickly than that.

**Are there any requirements for sending e-mail messages?** When you send an e-mail message to me or to another participant in the course, please observe the following guidelines:

- Include the title of the course in the subject field (e.g., Sustainability Leadership).
- Keep messages concise, and check spelling and grammar.
- Send longer messages as attachments.
- Sign your full name (the sender’s email is not always obvious).

### Course Topics, Activities & Schedule

#### Applied Sustainability (420.669.91 SU20)

**June 2017: Instructor: Paul Kazyak**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic/Event/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>~15 May</td>
<td>On-line course material and assignments available to students</td>
</tr>
<tr>
<td>27 May</td>
<td>Course officially begins</td>
</tr>
<tr>
<td>31 May</td>
<td>Self-Introduction ‘bios’ due by midnight; top 3 choices for student-led learning emailed to instructor by midnight</td>
</tr>
<tr>
<td>7 June</td>
<td>Discussion thread post on online intro lecture due by midnight; response to other student bios due by midnight; post on first required reading due by midnight</td>
</tr>
<tr>
<td>14 June</td>
<td>Post on 2nd set of required readings due by midnight</td>
</tr>
<tr>
<td>19 June-28 June</td>
<td><strong>EXTENDED FIELD TRIP</strong> (9AM on June 19 through noon on June 28th). CONVENING LOCATION: Homewood Campus in Baltimore, MD</td>
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</tbody>
</table>

Field visits: LEED Platinum campus building, community garden, home garden, permaculture operation, straw bale house, invasive plant survey, reforestation, high tunnel operation, sustainable stormwater system, sustainable residence tour, commercial scale residential composting facility, ThorpeWood lodge, experimental American chestnut grove, Black Rock hibernacula, Buzzard Branch biodiversity survey, local farm, Zero Energy construction, pervious parking lot, organic dairy farm, Maryland’s largest solar PV array, energy conservation audit.

Lecture Topics: Introduction to sustainability, Assessment tools, invasive species,
economics of sustainability, infrastructure, waste, food & food systems, reforestation, biodiversity, ecological connectivity, energy production, energy conservation, stormwater management, working within the political system, carbon footprint, human carrying capacity, ecosystem processes, systems thinking, climate, college and university sustainability efforts, soil and water, toxins, non-renewable resources, resource management for recreation, Sustainability Case Studies, human welfare, introduction to leadership.

Evening discussion topics: Impediments to adoption of sustainability measures, systems and levers exercise, impediments to sustainability implementation, wealth exercise.

29 June Systems thinking project begins
5 July Post on 3rd set of required readings due by midnight
12 July Post on 4th set of required readings due by midnight
19 July Post on 5th set of required readings due by midnight
26 July Post on 6th set of required readings due by midnight; systems thinking progress update due by midnight
2 August Post on 7th set of required readings due by midnight
9 August Post on 8th set of required readings due by midnight
18 August Systems thinking project write-up due by midnight; Class journals due

AGENDA (Draft; details likely subject to change) IN PREPARATION

University Policies

General

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a
link to the Student Request for Accommodation form can also be found on the [Disability Accommodations](#) page.

**Ethics & Plagiarism**

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

Read and adhere to JHU’s [Notice on Plagiarism](#).

**Dropping the Course**

You are responsible for understanding the university’s policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the [Academic Calendar](#).

**Getting Help**

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the [AAP online support page](#).** Also, contact your instructor at the email address listed in the syllabus.

**Copyright Policy**

All course materials are the property of JHU and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material content for any other purpose is prohibited, will be considered misconduct under the [JHU Copyright Compliance Policy](#), and may be cause for disciplinary action. In addition, encouraging academic dishonesty or cheating by distributing information about course materials or assignments which would give an unfair advantage to others may violate AAP’s [Code of Conduct](#) and the University’s [Student Conduct Code](#).

Specifically, recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the class. Other distributions of such materials by students may be deemed to violate the above University policies and be subject to disciplinary action.
Code of Conduct

To better support all students, the Johns Hopkins University non-academic Student Conduct Code has been integrated and updated to include all divisions of the University. In addition, it is important to note that all AAP students are still accountable for the Code of Conduct for Advanced Academic Programs.

Title IX

Confidentiality and Mandatory Reporting

As an instructor, one of my responsibilities is to help create a safe and inclusive learning environment on our campus. I also have mandatory reporting responsibilities related to my role as a Responsible Employee under the Sexual Misconduct Policy & Procedures (which prohibits sexual harassment, sexual assault, relationship violence and stalking), as well as the General Anti-Harassment Policy (which prohibits all types of protected status based discrimination and harassment). It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share information that I learn of regarding sexual misconduct, as well as protected status based harassment and discrimination, with the Office of Institutional Equity (OIE). For a list of individuals/offices who can speak with you confidentially, please see Appendix B of the JHU Sexual Misconduct Policies and Laws.

For more information on both policies mentioned above, please see: JHU Relevant Policies, Codes, Statements and Principles. Please also note that certain faculty and other University community members also have a duty as a designated Campus Safety Authority under the Clery Act to notify campus security of certain crimes, as well as a duty under State law and University policy to report suspected child abuse and/or neglect.