

# Course Syllabus

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## ENVH 406/506: Disasters and Public Health

(Fall 2022, 3 credits)

*Monday, 1:30pm - 4:20pm*

SOCC 221

Learning Group Google Drive: [\[link\]](#) 

<https://drive.google.com/drive/folders/1rINkPqwJFIUdU1kiykJ1zPtAQIrt-KVx?usp=sharing>

### **Instructor**

Nicole Errett, PhD, MSPH

Pronouns: she/her/hers

Assistant Professor

Department of Environmental and Occupational Health Sciences

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### **Teaching Assistant**

Sam Lovell

Pronouns: she/her/hers

MPH Student

Department of Environmental and Occupational Health Sciences

Email: [sclovell@uw.edu](mailto:sclovell@uw.edu) (<mailto:sclovell@uw.edu>)

### **Communication**

The teaching team will stay for a few minutes after class to answer any student questions or concerns. This is the best way to communicate with us. The second-best option is to send us an email. Please send ALL emails to both Nicole and Sam. This will maximize our response time and avoid duplicative

responses. As you all know, the pandemic has dramatically increased email volume, so please be patient with us. We will do our best to respond to you within two business days. Due to the limitations in the Canvas messaging service (e.g., that prevent us from seeing if another person has responded), we ask that you do not use the Canvas messaging services for course-related communications. Canvas message responses may be delayed.

## Office Hours

Sam will host office hours by appointment. Please email [sclovell@uw.edu \(mailto:sclovell@uw.edu\)](mailto:sclovell@uw.edu) to schedule an appointment.

Nicole will host office hours by appointment. Appointments must be scheduled at least 24 hours in advance. You can schedule an office hours appointment here:

<https://calendly.com/nerrett/officehours>  (<https://calendly.com/nerrett/officehours>)

## COVID Protocols And Safety

All UW students are expected to follow [state !\[\]\(3211b5d1d968fc1665909b34f9f16010\_img.jpg\)](https://doh.wa.gov/emergencies/covid-19) (<https://doh.wa.gov/emergencies/covid-19>), [local !\[\]\(d47ad152ec3d86a04ad64c8049e1f17f\_img.jpg\)](https://kingcounty.gov/depts/health/covid-19.aspx) (<https://kingcounty.gov/depts/health/covid-19.aspx>) and [UW COVID-19 policies and recommendations !\[\]\(6b7fbb0b7bdb78cadf73d50851a4dfb1\_img.jpg\)](https://www.washington.edu/coronavirus/) (<https://www.washington.edu/coronavirus/>).

Please be extra conscientious about masking during the first few weeks of the quarter, because we will have a lot of members of the community traveling and can reasonably expect to see a surge in COVID cases.

If you feel ill or exhibit possible COVID symptoms, you should not come to class. If you need to temporarily quarantine or isolate per CDC guidance and/or [campus policy, !\[\]\(c50c8b7b2cc2cf9ff925edec0ee94c0d\_img.jpg\)](https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm_source=uwhp&utm_medium=tiles&utm_campaign=spring-quarter) ([https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm\\_source=uwhp&utm\\_medium=tiles&utm\\_campaign=spring-quarter](https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm_source=uwhp&utm_medium=tiles&utm_campaign=spring-quarter)), you are responsible for notifying your instructors as soon as possible by email. **If you receive a positive COVID-19 test result, you must report to campus Environmental Health & Safety (EH&S) by emailing [covidehc@uw.edu \(mailto:covidehc@uw.edu\)](mailto:covidehc@uw.edu) or calling 206-616-3344.**

**Please check your email daily BEFORE coming to class.** If we need to conduct class remotely because the instructor or a guest speaker is complying with UW policies and unable to attend in person, we will send all registered students an email with a Zoom link for remote instruction. Please also keep an eye out for email communications from the University or the School of Public Health that will inform you of any future changes to policies or guidelines.

## Course Description

This course provides an introduction to different types of public health and environmental health disasters, their consequences, and the role of public health agencies and practitioners in preparedness, response, and recovery. The course will employ an all-hazards, domestic perspective, and explore

different types of natural, biological, chemical, radiological, nuclear, and other human-caused disasters. Through course lectures and readings, case studies, discussion, and debate, students will learn and understand the foundational concepts of the public and environmental health community's role in preparing for, responding to, and recovering from disasters. Through in-course activities and assignments, students will learn to apply these concepts to real-world disasters, and identify, evaluate, and synthesize information related to public health disaster response. The course is designed to develop proficiency in analyzing and evaluating the public health response to disasters and identifying solutions and methods for improvement.

Prerequisites: none, junior and senior undergraduates and graduate students only. All students are expected to have an understanding of public health fundamentals.

## Learning Objectives

Upon completing this course, students will be able to:

1. Describe types of disasters and their public health consequences.
2. Describe the public health preparedness infrastructure in the United States.
3. Identify the key stakeholders involved in preparedness.
4. Understand the policy, legal and ethical frameworks for U.S. public health preparedness.
5. Explain the role of environmental health and other public health practitioners in an emergency.
6. Identify and evaluate strengths and gaps in the preparedness system and suggest methods for improvement.

In addition, graduate students will be able to:

1. Synthesize information to identify a scientific problem associated with disaster preparedness.
2. Propose a methodological approach to address a disaster preparedness-related scientific problem within realistic time and resource constraints.

## Course Overview and Format

This course is grounded in student-centered, active learning. At the beginning of the course, students will be introduced to different types of hazards that may cause disasters. The course will go on to introduce core public health preparedness concepts and issues through readings, lecture, discussion, and assignments. Topics will include:

- Overview of Public Health Emergency Preparedness and Response
- Understanding Community Needs Before, During and After Disaster
- Social Vulnerability and Disasters
- Disaster risk communication
- Science as a core component of public health emergency response
- Laws and Policies that Support Public Health Emergency Preparedness and Response

- Responding to public health emergencies: the roles and responsibilities of healthcare systems, public health, and emergency management agencies

Students will apply these concepts through discussion-based exercises. Students will further explore social vulnerability of disaster through reflection assignments on Eric Klinenberg's *Heat Wave: A Social Autopsy of Disaster*. Additionally, students will develop materials to communicate public health disaster risk, suggest improvements to disaster response, and identify opportunities to apply skills and showcase certificates earned through this course in their professional communications.

Graduate students will also develop a short research protocol to address a disaster-related scientific question.

**Learning groups:** You will be assigned to a learning group. Whenever the class breaks out for small activities or meets for synchronous discussions, you will meet with your learning group. You will also conduct group assignments with your assigned learning group. Learning group changes may be made at the discretion of the instructional team.

## **Course Activities**

Classes will be formatted to include a combination of training modules, live lectures, discussion and interactive activities. When appropriate, a subject matter expert may be asked to present a topic to the class. Students are encouraged to engage these special guests through discussion and questioning. In addition, the course will make use of the CONVERGE training modules, developed by the Natural Hazards Center at the University of Colorado Boulder. Time spent on CONVERGE modules will offset time spent on other course activities so that students spend no more than **9 hours per week on all course activities** [↗ \(https://www.washington.edu/students/reg/credit.html\)](https://www.washington.edu/students/reg/credit.html). We will also visit the NSF-supported Natural Hazards and Disaster Reconnaissance Facility (RAPID Facility) located on the University of Washington campus to learn more about disaster research and perishable data collection.

## **Course Requirements**

Each student will be expected to:

- Prepare for each class session by completing assigned readings and modules, participate actively in course discussions, and engage guest speakers.
- Complete all graded assignments and activities (see Graded Assignments section).

Students will be required to read:

- Klinenberg, Eric. *Heat Wave: A Social Autopsy of Disaster* in Chicago. Chicago: University of Chicago Press, 2002, 2015.

The book has been placed on reserve for 24-hour loan at the Odegaard Undergraduate Library, but it is recommended that you purchase your own copy if possible. *It is fine to get the first or second edition, as*

*the only difference is the preface.*

All other required readings and viewings will be provided through the library or on the Canvas Site. In order to promote learning from recent events, some assigned or suggested readings are from news media. Many news media outlets use a paywall; in other words, they allow free access to a certain number of articles (i.e., a “free article allowance”), and then require a subscription to access additional articles. Required readings are within the free article allowance for any given news media outlet. However, if you are reading articles from the same news media outlets outside of class, you may exceed your personal free article allowance. You may visit the UW Libraries for assistance in accessing news sources for academic purposes: <https://guides.lib.uw.edu/research/news/enews> (<https://guides.lib.uw.edu/research/news/enews>). Many news media outlets also make reduced cost subscriptions available to students.

## **Graded Assignments**

All students will be expected to submit eight assignments, as detailed below. Two of these assignments will be conducted in groups, and two other assignments have a group component. All activities related to group assignments will occur during regularly scheduled class time. If you are unable to attend the sessions associated with the assignment due to COVID-19 policies or other extenuating circumstances, you must contact the teaching team within 24 hours for alternative approaches to completing these assignments. If you know you will miss a session in advance (e.g., due to religious accommodations or athletic commitments), you must contact the teaching team at least two weeks in advance for alternative approaches to completing these assignments.

In addition, students enrolled in ENVH 506 will be required to complete a “Disaster Research Proposal” assignment aligned with the additional learning objectives for this course. Students may opt to complete this assignment individually or as a group (if the research proposed is not planned for an individual’s thesis or capstone work).


**All assignments are due on Mondays before class (at 1:29pm) via Canvas unless indicated otherwise.**

### Hazards and health infographic:

Students will develop an infographic designed to inform a lay audience about an assigned hazard. Infographics will include a definition of the hazard, ways in which severity/magnitude of the hazard is measured, possible secondary hazards to be aware of, short- and long-term public health impacts, and steps to improve preparedness.

**Due: October 10, 2022.**

### CONVERGE Modules:

Students will complete two [CONVERGE Training Modules](https://converge.colorado.edu/resources/training-modules/)  (<https://converge.colorado.edu/resources/training-modules/>) (Social Vulnerability and Disasters and

Collecting and Sharing Perishable Data). These modules were developed by the Natural Hazards Center at the University of Colorado - Boulder “to accelerate the training of hazards and disaster researchers, with a special emphasis on students, emerging and situational researchers, and those interested in joining or leading interdisciplinary teams”.

Participation requires that each student register with the CONVERGE Training Module Program. Each module takes approximately one hour to complete. To earn a Certificate of Completion, students must take a quiz and receive at least 80%. Students must submit their Certificate of Completion to the appropriate Canvas assignment by the due date.

The Collecting and Sharing Perishable Data CONVERGE Module Certificate of Completion is **Due: October 24, 2022.**

The Social Vulnerability and Disasters CONVERGE Module Certificate of Completion is **Due: November 7, 2022.**

### SASPER Reflection Assignment:

During the third week of the course, students will participate in a training on the Centers for Disease Control and Prevention’s Community Assessment for Public Health Emergency Response (CASPER) method, and an ongoing project (the Seattle Assessment for Public Health Emergency Response or “SASPER”), to employ CASPER methods to assess community needs related to climate change health impacts in the Southpark and Georgetown neighborhoods of Seattle. In one page or less, students will reflect on the strengths and limitations of the CASPER approach to collect information about community needs before and after a disaster. They will offer at least one recommendation to strengthen or complement the approach, particularly as it relates to informing equitable preparedness and response strategies and inclusion of diverse voices.

- ENVH 506: For extra credit, graduate students will have the opportunity to participate in door-to-door SASPER interview teams on Saturday, October 29 or November 5 after they’ve completed the training (a half day commitment on either day is required. See “extra credit’ below for additional information).

**Due: November 14, 2022.**

### Deadly Choices at Memorial Discussion:

Students will read Fink’s “The Deadly Choices at Memorial” article prior to class. Following a lecture on ethical issues in disaster response, they will discuss responses to a series of questions with their learning groups. One member of the learning group will turn in their group’s responses.

**Due: November 14, 2022 at the end of class (4:20pm).**

### Duwamish Valley Vulnerability Assignment:

Individually, students will identify a social vulnerability in the Duwamish Valley that increases disaster risk. Students will describe the vulnerability and how and why it increases disaster risk in one of the following formats of their choice:

- A photo or drawing and a maximum of one-page written explanation
- A short podcast episode (2-3 minutes) explaining the concepts
- A short video (2-3 minutes) explaining the concepts
- A comic book or “zine” that illustrates and explains the concepts in visual form
- A picture book that introduces the concepts as part of a fictional story
- A webpage with brief explanations of concepts, images to illustrate those concepts, and links to relevant information


**Due: November 21, 2022.**

### Book Club:

Students will be required to read *Heat Wave: A Social Autopsy of Disaster* by Eric Klinenberg. Discussion questions will be made available on the course website by the third week of class, which will be used to guide a discussion on the book. Students will be expected to complete and submit response(s) to discussion prompts/questions. Students will be expected to actively engage in a facilitated discussion with their learning groups.


**Due: November 28, 2022.** *In addition, there will be a graded learning group discussion on November 28, 2022 during class. You must make arrangements with the teaching team at least two weeks in advance if you have an approved excuse for missing this discussion.*

### IS-100.C: Introduction to Incident Command System Certificate:

Students will also be required to take FEMA’s Interactive web-based course: IS-100.C: Introduction to Incident Command System. It is freely available online [here](https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c) . (<https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c>). Students will be required to submit a certificate of completion. Note: completion certificates can take up to 24 hours to arrive via email and students should plan accordingly.

**Due: December 5, 2022.**

### Disaster Research Proposal (ENVH 506 students only)


Graduate students will also be required to develop a short research proposal to address a public health disaster-related scientific question that can be submitted to the [Natural Hazards Center’s Quick Response Research Program](https://hazards.colorado.edu/research/quick-response) . (<https://hazards.colorado.edu/research/quick-response>).


**Topic Due: November 14, 2022 (by email to Sam and Nicole)**

**Due: December 5, 2022.**

## Extra Credit

Students may earn up to a total of 5 extra credit points towards their final course grade (out of 100 points).

*ENVH 406:* Extra credit may be earned by completing two additional [CONVERGE Training Module](https://converge.colorado.edu/resources/training-modules/)  [\(https://converge.colorado.edu/resources/training-modules/\)](https://converge.colorado.edu/resources/training-modules/)s of your choice and submitting the associated Certificate of Completion in the Canvas assignment by the last day of the course.

*ENVH 506:* Extra credit points may be earned: 1) by completing two additional [CONVERGE Training Module](https://converge.colorado.edu/resources/training-modules/)  [\(https://converge.colorado.edu/resources/training-modules/\)](https://converge.colorado.edu/resources/training-modules/)s of your choice and submitting the associated Certificate of Completion in the Canvas assignment by the last day of the course; **OR** 2) by participating as a SASPER interviewer on Saturday, October 29th or November 4th. Only students who participate in the CASPER training may participate as an interviewer. Additional information, including exact times, requirements, and instructions on how to sign up, will be announced during class and on Canvas. This opportunity may be subject to capacity limitations on each day. As we will plan the logistics of the day based on the number of interviewers, students who sign up but fail to report without notice and/or legitimate excuse may be penalized, including by losing points on their overall course grade.

## Late Policy

All assignments are short and have at least one week of lead time to ensure you have ample time to complete them. We strongly suggest you start working on your assignments early, so that last minute challenges do not prevent timely submission of your assignments. In the event that you are unable to complete your assignment on time, a late policy will be enforced to ensure fairness to other students. We do recognize that some challenges are simply insurmountable, for example, physical or mental illness or a family emergency. If you face such an insurmountable challenge, please contact the instructor as soon as possible. In exceptional circumstances, the late policy may be waived or modified at the instructor's discretion.

Under most circumstances, 10% of the total possible point value will be deducted from assignments that are submitted within 24 hours after the original due date; 20% of the total possible point value will be deducted from assignments that are submitted between 24 and 48 hours after the original due date; 30% of the total possible point value will be deducted from assignments that are submitted between 48 and 72 hours after the original due date; and 50% of the total possible point value will be deducted from assignments that are submitted between 72 hours and one week after the original due date. Assignments will not be accepted beyond one week after the original due date.

## Student Evaluation

ENVH 406 (undergraduate students) course grades will be calculated as follows:



15% Duwamish Valley hazards and health infographic assignment

15% Duwamish Valley vulnerability assignment

15% CASPER reflection assignment

10% CONVERGE Training Modules assignments (5% each)

10% Deadly Choices at Memorial assignment

10% ICS 100.C Certificate assignment

25% Book Club assignment

ENVH 506 (graduate students) course grades will be calculated as follows:

10% Duwamish Valley hazards and health infographic assignment

10% Duwamish Valley vulnerability assignment

15% CASPER reflection assignment

10% CONVERGE Training Modules assignments (5% each)

10% Deadly Choices at Memorial assignment

5% ICS 100.C Certificate assignment

25% Book Club assignment

15% Disaster research proposal

#### 4.0 Grading Scale:

ENVH 406 grades will be converted using the following conversion scale:

This table describes how numeric grades (out of 100) will convert to the 4.0 grade scale for the ENVH 406 class.

Minimum Score	Grade Point
≥98	4.0
≥96.9	3.9
≥95.8	3.8

≥94.7	3.7
≥93.6	3.6
≥92.5	3.5
≥91.5	3.4
≥90.4	3.3
≥89.3	3.2
≥88.2	3.1
≥87.1	3.0
≥86	2.9
≥84.9	2.8
≥83.8	2.7
≥82.7	2.6
≥81.6	2.5
≥80.5	2.4
≥79.5	2.3
≥78.4	2.2
≥77.3	2.1
≥76.2	2.0

≥75.1	1.9
≥74	1.8
≥72.9	1.7
≥71.8	1.6
≥70.7	1.5
≥69.6	1.4
≥68.5	1.3
≥67.5	1.2
≥66.4	1.1
≥65.3	1.0
≥64.2	0.9
≥63.1	0.8
≥62	0.7
<62	0.0

ENVH 506 grades will be converted using the following scale:

This table describes how numeric grades (out of 100) will convert to the 4.0 grade scale for the ENVH 506 class.

Minimum Score	Grade Point

≥98	4.0
≥96.4	3.9
≥94.9	3.8
≥93.3	3.7
≥91.7	3.6
≥90.2	3.5
≥88.6	3.4
≥87	3.3
≥85.5	3.2
≥83.9	3.1
≥82.3	3.0
≥80.8	2.9
≥79.2	2.8
≥77.7	2.7
≥76.1	2.6
≥74.5	2.5
≥73	2.4
≥71.4	2.3
≥69.8	2.2

≥68.3	2.1
≥66.7	2.0
≥65.1	1.9
≥63.6	1.8
≥62	1.7
<62	0



## Course Schedule

### Week 1: Intro to Disasters and Public Health


Monday, October 3, 2022

#### **Before class:**

#### Read:

- Course syllabus
- Schulz K. The Really Big One. *The New Yorker*. July 20, 2015.  
<https://www.newyorker.com/magazine/2015/07/20/the-really-big-one>   
[. \(https://www.newyorker.com/magazine/2015/07/20/the-really-big-one\)](https://www.newyorker.com/magazine/2015/07/20/the-really-big-one). **\*\*This will be the focus of an in-class discussion activity!**
- Disaster Risk. Prevention Web Website. United Nations Office for Disaster Risk Reduction. 2020.  
 Available: <https://www.preventionweb.net/disaster-risk/risk/disaster-risk/>   
[\(https://www.preventionweb.net/disaster-risk/risk/disaster-risk/\)](https://www.preventionweb.net/disaster-risk/risk/disaster-risk/)

#### Read if you want to learn more (i.e., optional):

- Ebi KL, Vanos J, Baldwin JW, Bell JE, Hondula DM, Errett NA, Hayes K, Reid CE, Saha S, Spector J, Berry P. Extreme Weather and Climate Change: Population Health and Health System Implications. *Annu Rev Public Health*. 2021 Apr 1;42:293-315. doi: 10.1146/annurev-publhealth-012420-105026. Epub 2021 Jan 6. PMID: 33406378.
- Carroll AE & Frakt A. The Long-Term Health Consequences of Hurricane Harvey. *New York Times*. August 31, 2017. [https://www.nytimes.com/2017/08/31/upshot/the-long-term-health-consequences-of-hurricane-harvey.html?mcubz=3&\\_r=0](https://www.nytimes.com/2017/08/31/upshot/the-long-term-health-consequences-of-hurricane-harvey.html?mcubz=3&_r=0) 

[https://www.nytimes.com/2017/08/31/upshot/the-long-term-health-consequences-of-hurricane-harvey.html?mcubz=3&\\_r=0](https://www.nytimes.com/2017/08/31/upshot/the-long-term-health-consequences-of-hurricane-harvey.html?mcubz=3&_r=0).

**Complete:**

- n/a

**During class:**


- Lecture: *Introduction to the course* by Nicole Errett
- Discussion: Meet your learning groups and develop a group community agreement
- Lecture: *Defining Disaster and Disaster Risk* by Nicole Errett
- Discussion: “The Really Big One”

**Week 2: Overview of Public Health Emergency Preparedness and Response**

Monday, October 10, 2022

**Before class:**

Read:

- “Conceptualizing the Complex PHEPR System” in National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Board on Health Sciences Policy; Committee on Evidence-Based Practices for Public Health Emergency Preparedness and Response; Downey A, Brown L, Calonge N, editors. Evidence-Based Practice for Public Health Emergency Preparedness and Response. Washington (DC): National Academies Press (US); 2020 Jul 14. 1, Advancing Public Health Emergency Preparedness and Response System Capabilities to Respond to Increasing Threats. Available: [https://www.ncbi.nlm.nih.gov/books/NBK563994/#\\_pz13-10a](https://www.ncbi.nlm.nih.gov/books/NBK563994/#_pz13-10a)    
 [https://www.ncbi.nlm.nih.gov/books/NBK563994/#\\_pz13-10a](https://www.ncbi.nlm.nih.gov/books/NBK563994/#_pz13-10a)

**Complete:**

- Hazards and Health Infographic (**Due: Monday, October 10, 2022 at 1:29pm**)

**During class:**

- Lecture: *The Past, Present and Future of Public Health Emergency Preparedness and Response (PHEPR)* by Nicole Errett
- Discussion: “Who's who” in public health emergency preparedness and response

**Week 3: Understanding Community Needs Before, During and After Disaster**

Monday, October 17, 2022

**Before class:**Read:

- Houtz J. Disaster Resilience with an Equity Focus. 2022. <https://deohs.washington.edu/hsm-blog/disaster-resilience-equity-focus> ↪ [\\_\(https://deohs.washington.edu/hsm-blog/disaster-resilience-equity-focus\)\\_](https://deohs.washington.edu/hsm-blog/disaster-resilience-equity-focus)
- Malilay J, Heumann M, Perretta D, et al. The Role of Applied Epidemiology Methods in Disaster. *Am J Public Health*. 2014; 104(11): 2092–2102. doi: 10.2105/AJPH.2014.302010
- Schnall A, Nakata N, Talbert T, Bayleyegn T, Martinez D, Wolkin A. Community Assessment for Public Health Emergency Response (CASPER): An Innovative Emergency Management Tool in the United States. *Am J Public Health*. 2017 Sep;107(S2):S186-S192. doi: 10.2105/AJPH.2017.303948. PMID: 28892435; PMCID: PMC5594388.

Complete:

- n/a

**During class:**

- Lecture and Discussion: *Overview of the Seattle Assessment of Public Health Emergency Response (SASPER), and Community Assessment for Public Health Emergency Response (CASPER) training* by Amy Schnall, U.S. Centers for Disease Control and Prevention

**Week 4: Science as a core component of public health emergency response**

Monday, October 24, 2022

**Before class:**Read:

- Lurie N, Manolio T, Patterson AP, Collins F, Frieden T. Research as a part of public health emergency response. *N Engl J Med*. 2013 Mar 28;368(13):1251-5. doi: 10.1056/NEJMSb1209510. PMID: 23534565.
- Kishore N, Marques D, Mahmud A, et al. Mortality in Puerto Rico after Hurricane Maria. *N Engl J Med* 2018; 379:162-170. DOI: 10.1056/NEJMSa1803972

Complete:

- CONVERGE Training Module: Collecting and Sharing Perishable Data (**Due: Monday, October 24, 2022 at 1:29pm**)

**During class:**


- Lecture and Discussion: *NIEHS Disaster Research Response Program* by Aubrey Miller, MD, MPH, National Institute of Environmental Health Sciences
- Lecture & Tour: National Science Foundation-supported Natural Hazards and Disaster Reconnaissance “RAPID” Facility

## Week 5: Disaster Risk Communication


Monday, October 31, 2022

### **Before class:**


#### Read:

- Centers for Disease Control and Prevention. Crisis + Emergency Risk Communication: Messages and Audiences. 2018 Update. Available:  
[https://emergency.cdc.gov/cerc/ppt/CERC\\_Messages\\_and\\_Audiences.pdf](https://emergency.cdc.gov/cerc/ppt/CERC_Messages_and_Audiences.pdf)   
[https://emergency.cdc.gov/cerc/ppt/CERC\\_Messages\\_and\\_Audiences.pdf](https://emergency.cdc.gov/cerc/ppt/CERC_Messages_and_Audiences.pdf)

#### Scan:

- World Health Organization. (2017). Communicating risk in public health emergencies: a WHO guideline for emergency risk communication (ERC) policy and practice. World Health Organization.  
<https://apps.who.int/iris/handle/10665/259807>  <https://apps.who.int/iris/handle/10665/259807>.  
License: CC BY-NC-SA 3.0 IGO
  - Note: the evidence synthesis that underlies the guideline (linked to in the guideline) is also a very useful resource!

#### Watch:

- [World Health Organization’s Communicating Risks and Evidence in a Public Health Emergency](https://www.who.int/news-room/events/detail/2021/09/14/default-calendar/communicating-risks-and-evidence-in-a-public-health-emergency)  <https://www.who.int/news-room/events/detail/2021/09/14/default-calendar/communicating-risks-and-evidence-in-a-public-health-emergency> webinar

Complete: n/a

### **During class:**

- Lecture: *Disaster Risk Communication* by Dr. Ann Bostrom, PhD, MBA, Weyerhaeuser Endowed Professor in Environmental Policy, UW Evans School of Public Policy and Governance
- Discussion: Risk Communication Activity

## Week 6: Social Vulnerability and Disasters

Monday, November 7, 2022



**Before class:**Read:

- Chaplin, D., Twigg, J., & Lovell, E. (2019). Intersectional approaches to vulnerability reduction and resilience-building. *Resilience Intel*, 12, 1–35. [[cdn.odi.org](https://cdn.odi.org)]. [↗](https://cdn.odi.org/media/documents/12651.pdf)  
(<https://cdn.odi.org/media/documents/12651.pdf>)
- Wulff K, Donato D, Lurie N. What is health resilience and how can we build it? *Annu Rev Public Health*. 2015;36:361-374. doi: 10.1146/annurev-publhealth-031914-122829 [doi].
- Evans MK. Covid's Color Line – Infectious Disease, Inequity, and Racial Justice. *N Engl J Med*. 2020; 383:408-410  
DOI: 10.1056/NEJMp2019445

Read if you want to learn more (i.e., optional):

- Bowleg, L. (2021). Evolving Intersectionality Within Public Health: From Analysis to Action. *American Journal of Public Health*, 111(1), 88–90 [[ncbi.nlm.nih.gov](https://www.ncbi.nlm.nih.gov)] [↗](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7750585/)  
(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7750585/>)
- Thomas, D. S. K., Jang, S., & Scandlyn, J. (2020). The CHASMS conceptual model of cascading disasters and social vulnerability: The COVID-19 case example. *International Journal of Disaster Risk Reduction: IJDRR*, 51, 101828.

Complete:

- CONVERGE Training Module: Social Vulnerability and Disasters (**Due: Monday November 7, 2022 at 1:29pm**)

**During class:**

- Lecture: *Housing Precarity and Disasters* by Dr. Jamie Vickery, PhD, Research Scientist, UW Collaborative on Extreme Event Resilience

**Week 7: Ethical Issues in Disasters**


Monday, November 14, 2022

**Before class:**Read:

- Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. *Lancet*. 2009;373(9661):423-431. doi: 10.1016/S0140-6736(09)60137-9 [doi].
- Fink S. The Deadly Choices at Memorial. *New York Times Magazine*. August 25, 2009.  
<http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all> [↗](http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all)  
(<http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=all>).

- Sabatello M, Burke TB, McDonald KE, Appelbaum PS. Disability, Ethics, and Health Care in the COVID-19 Pandemic. *Am J Public Health*. 2020 Oct;110(10):1523-1527. doi: 10.2105/AJPH.2020.305837. Epub 2020 Aug 20. PMID: 32816541; PMCID: PMC7483109.

Read if you want to learn more (i.e., optional):

- Smith MJ, Ahmad A, Arawi T, Dawson A, Emanuel EJ, Garani-Papadatos T, Ghimire P, Ilyasu Z, Lei R, Mastroleo I, Mathur R, Okeibunor J, Parker M, Saenz C, Thomé B, Upshur REG, Voo TC. Top five ethical lessons of COVID-19 that the world must learn. *Wellcome Open Res*. 2021 Jan 29;6:17. doi: 10.12688/wellcomeopenres.16568.1. PMID: 33693063; PMCID: PMC7919608.
- Knowles H. Hospitals overwhelmed by covid are turning to 'crisis standards of care.' What does that mean? *The Washington Post*. September 22, 2021.  
<https://www.washingtonpost.com/health/2021/09/22/crisis-standards-of-care/>   
[\(https://www.washingtonpost.com/health/2021/09/22/crisis-standards-of-care/\)](https://www.washingtonpost.com/health/2021/09/22/crisis-standards-of-care/)

Complete:

- CASPER Reflection Assignment (**Due: November 14, 2022 at 1:29pm**)
- ENVH 506 students only: Disaster Research Proposal Topic (**Due: November 14, 2022 at 1:29pm by email to Sam and Nicole**)

**During class:**


- Lecture: *Ethical Considerations in Disasters* by Nicole Errett
- Discussion: Deadly Choices at Memorial Discussion
- Complete: Deadly Choices at Memorial Discussion Assignment (**Due: Monday, November 14, 2022 at 4:20pm**)

### Week 8: Laws and Policies that Support Public Health Emergency Preparedness and Response

Monday, November 21, 2022

**Before class:**

Read:

- Moulton AD, Gottfried RN, Goodman RA, Murphy AM, Rawson RD. What is public health legal preparedness? *J Law Med Ethics*. 2003;31(4):672-683.
- Selected Federal Legal Authorities Pertinent to Public Health Emergencies. Centers for Disease Control and Prevention. August 2017. Available: <https://www.cdc.gov/php/docs/ph-emergencies.pdf>   
[\(https://www.cdc.gov/php/docs/ph-emergencies.pdf\)](https://www.cdc.gov/php/docs/ph-emergencies.pdf)

Complete:

- Duwamish Valley Vulnerability Assignment (**Due: Monday, November 21, 2022 at 1:29pm**)

**During class:**

- Lecture: *Public Health Legal Preparedness* by Nicole Errett, PhD, MSPH
- Discussion: Emergency Management Assistance Compact

**Week 9: Book Club: Heatwave: A Social Autopsy of Disaster**

Monday, November 28, 2022

**Before class:**Read:

- Klinenberg, Eric. *Heat Wave: A Social Autopsy of Disaster in Chicago*. Chicago: University of Chicago Press, 2002, 2015. (*It is fine to get the first or second edition, the only difference is the preface*).

Complete:

- Book Club Written Response (**Due: Monday, November 28, 2022 at 1:29pm**)


**During class:**

- Discussion: Book Club Discussion (**Graded! You must make arrangements with the teaching team at least two weeks in advance if you have an approved excuse for missing this discussion.**)

**Week 10: Responding to public health emergencies: the roles and responsibilities of healthcare systems, public health, and emergency management agencies**

Monday, December 5, 2022

**Before class:**Listen:

- Pailthrop B. Lessons learned in the Pacific Northwest from the deadly 2021 'heat dome.' June 30, 2022. KNKX Public Radio. Available: <https://www.knkx.org/environment/2022-06-30/lessons-learned-in-the-pacific-northwest-from-the-deadly-2021-heat-dome>   
(<https://www.knkx.org/environment/2022-06-30/lessons-learned-in-the-pacific-northwest-from-the-deadly-2021-heat-dome>)

Complete:

- IS-100.C: Introduction to Incident Command System Certificate (**Due: December 5, 2022 at 1:29pm**)
- ENVH 506 students only: Disaster Research Proposal (**Due: December 5, 2022 at 1:29pm**)

**During class:**

Panel Discussion: Working together to protect public health in disasters: A case study of the 2021 Heat Dome response

- Reid Wolcott, National Weather Service
- Nate Weed, Washington Department of Health
- Resham Patel, Public Health – Seattle and King County
- Onora Lien, Northwest Healthcare Response Network
- Danica Little, University of Washington Healthcare System

**After class:** Enjoy your holiday break!

## **UW Academic Policies and Resources**

### **Religious Accommodations**

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/) [\(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/\)](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request](https://registrar.washington.edu/students/religious-accommodations-request/) [\(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/) form [\(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/).



### **Access and Accommodations**

Your experience in this class is important to me. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS at [disability.uw.edu](http://depts.washington.edu/uwdrs/) [\(http://depts.washington.edu/uwdrs/\)](http://depts.washington.edu/uwdrs/).

## [\(http://depts.washington.edu/uwdrs/\)](http://depts.washington.edu/uwdrs/) Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of [the University of Washington Student Conduct Code](https://www.washington.edu/studentconduct/)  [\(https://www.washington.edu/studentconduct/\)](https://www.washington.edu/studentconduct/) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and [the SPH Academic Integrity Policy](https://sph.washington.edu/students/academic-integrity-policy)   [\(https://sph.washington.edu/students/academic-integrity-policy\)](https://sph.washington.edu/students/academic-integrity-policy). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

### **SPH Land Acknowledgment**

The University of Washington acknowledges the Coast Salish people of this land, the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip and Muckleshoot nations.

### **Classroom Climate**

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to create an environment that reflects community and mutual caring. We encourage students with concerns about classroom climate to talk to your instructor, your faculty or academic advisor, or a member of the departmental or SPH Diversity Committee. Victoria Gardner ([vg@uw.edu](mailto:vg@uw.edu) [\(mailto:vg@uw.edu\)](mailto:vg@uw.edu)), SPH Assistant Dean for Equity, Diversity & Inclusion, is also a resource for students with concerns related to equity, diversity, and inclusion.

### **Equity, Diversity and Inclusion**

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of University education. In SPH, students are expected:

1. To respect individual differences, which may include, but are not limited to, age, cultural background, disability, ethnicity, family status, gender, immigration status, national origin, race, religion, sex, sexual orientation, socioeconomic status and veteran status.
2. To engage respectfully in the discussion of diverse worldviews and ideologies embedded in course readings, presentations and artifacts, including those course materials that are at odds with personal beliefs and values.
3. To encourage students with concerns about classroom climate to talk to their instructor, adviser, a member of the departmental or SPH EDI Committee, the Assistant Dean for EDI, or the program's director.

## Bias Concerns

The Office of the Dean has a [student concern policy](https://sph.washington.edu/students/student-concern-policy), a faculty concern policy and standard HR procedures for staff concerns. Our 2018 climate survey states that most people in SPH do not report bias incidents because they do not know where to go. Students are encouraged to report any incidents of bias to someone they feel comfortable with, including instructors, advisers or department staff. They can email [dcinfo@uw.edu](mailto:dcinfo@uw.edu) for immediate follow up. Bias concerns can be anonymously and confidentially reported at this link <https://sph.washington.edu/about/diversity/bias-concerns>. Data is collected by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for resolution and areas are identified for further training.

## Personal Pronouns

According to the UW First Year Programs, being an ally is not just about intention, it's also about behavior. We share our pronouns because we strive to cultivate an inclusive environment where people of all genders feel safe and respected. We cannot assume we know someone's gender just by looking at them. So we invite everyone to share their pronouns.

## Safety

Call SafeCampus at 206-685-7233 anytime – no matter where you work or study – to anonymously discuss safety and well-being concerns for yourself or others. SafeCampus's team of caring professionals will provide individualized support, while discussing short- and long-term solutions and connecting you with additional resources when requested.

## Excused Absence from Class

Students are expected to attend class and to participate in all graded activities. A student who is anticipating being absent from class due to a Religious Accommodation activity needs to complete the Religious Accommodations request process by the second Friday of the quarter. Students who anticipate missing class due to attendance at academic conferences or field trips, or participation in university sponsored activities should provide a written notice to the instructor ahead of the absence. The instructor will determine if the graded activity or exam can be rescheduled or if there is equivalent work that can be done as an equivalent, as determined by the instructor.

## Medical Excuse Notes



Students are expected to attend class and to participate in all graded activities. To protect student privacy and the integrity of the academic experience, students will not be required to provide a medical excuse note to justify an absence from class due to illness. A student absent from any graded class activity or examination due to illness must request, in writing, to take a rescheduled examination or

perform work judged by the instructor to be the equivalent. Students are responsible for taking any number of examinations for which they are scheduled on a given day and may not request an adjustment for this reason alone.


## Recording of Remote Class Sessions

This course is scheduled to run synchronously at the scheduled class time, and some sessions may be available via Zoom. These Zoom class sessions may be recorded. The recording will capture the presenter's audio, video and computer screen. Student audio and video will be recorded if they share their computer audio and video during the recorded session. The recordings will only be accessible to students enrolled in the course to review materials. These recordings will not be shared with or accessible to the public. The University and Zoom have FERPA-compliant agreements in place to protect the security and privacy of UW Zoom accounts. Students who do not wish to be recorded should change their Zoom screen name to hide any personal identifying information such as their name or UW Net ID, and not share their computer audio or video during their Zoom sessions.

## Writing Resources

All written assignments for this class must be high quality, well researched, well organized, and well written. Use plain language instead of jargon. The instructors will consider the clarity of writing when grading assignments. Writing is an important transferable skill for all career pathways. Establishing a strong foundation in writing skills will help students be successful throughout their future course work and career. Therefore, this course includes written assignments with the goal of helping students identify areas of strength and improvement in writing. However, if a student feels that they could benefit from additional opportunities to improve their writing skills, a list of resources at the UW and others accessible online can be found on the [SPH website](https://sph.washington.edu/sites/default/files/inline-files/Writing-Resources-4.3.19.pdf)  (<https://sph.washington.edu/sites/default/files/inline-files/Writing-Resources-4.3.19.pdf>) and on the [DEOHS intranet](https://portal.deohs.washington.edu/index.php/academic-support-writing-resources)  (<https://portal.deohs.washington.edu/index.php/academic-support-writing-resources>).





## Course Summary:

Date	Details	Due
Mon Oct 4, 2021	 <a href="#">ENV H 406/506 Au 21: Disasters And Public Health</a> <a href="https://canvas.uw.edu/calendar?event_id=2849934&amp;include_contexts=course_1580140">https://canvas.uw.edu/calendar?event_id=2849934&amp;include_contexts=course_1580140</a>	1:30pm to 4:30pm

Date	Details	Due
Tue Oct 5, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849935&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849935&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Wed Oct 6, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849936&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849936&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Thu Oct 7, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849937&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849937&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Fri Oct 8, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849938&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849938&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Sat Oct 9, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849939&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849939&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Sun Oct 10, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849940&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849940&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Mon Oct 11, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849941&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849941&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Tue Oct 12, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849942&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849942&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm
Wed Oct 13, 2021	 <a href="https://canvas.uw.edu/calendar?event_id=2849943&amp;include_contexts=course_1580140">ENV H 406/506 Au 21: Disasters And Public Health (https://canvas.uw.edu/calendar? event_id=2849943&amp;include_contexts=course_1580140)</a>	1:30pm to 4:30pm



Date	Details	Due
Mon Oct 10, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584585">ENVH 406: Hazards and Health Infographic</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584585">https://canvas.uw.edu/courses/1580140/assignments/7584585</a>	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7612661">ENVH 506: Hazards and Health Infographic</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7612661">https://canvas.uw.edu/courses/1580140/assignments/7612661</a>	due by 1:29pm
Mon Oct 24, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584577">CONVERGE Training Module: Collecting and Sharing Perishable Data</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584577">https://canvas.uw.edu/courses/1580140/assignments/7584577</a>	due by 1:29pm
Mon Nov 7, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584579">CONVERGE Training Module: Social Vulnerability and Disasters</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584579">https://canvas.uw.edu/courses/1580140/assignments/7584579</a>	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7645616">CASPER Reflection Assignment</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7645616">https://canvas.uw.edu/courses/1580140/assignments/7645616</a>	due by 1:29pm
Mon Nov 14, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7740212">ENVH 506: Submit Disaster Research Proposal Question(s)</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7740212">https://canvas.uw.edu/courses/1580140/assignments/7740212</a>	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584575">Deadly Choices at Memorial Discussion Assignment</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584575">https://canvas.uw.edu/courses/1580140/assignments/7584575</a>	due by 4:20pm
Mon Nov 21, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584586">ENVH 406: Duwamish Valley Vulnerability Assignment</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584586">https://canvas.uw.edu/courses/1580140/assignments/7584586</a>	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7612699">ENVH 506: Duwamish Valley Vulnerability Assignment</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7612699">https://canvas.uw.edu/courses/1580140/assignments/7612699</a>	due by 1:29pm
Mon Nov 28, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584573">Book Club Written Response</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584573">https://canvas.uw.edu/courses/1580140/assignments/7584573</a>	due by 1:29pm
Mon Dec 5, 2022	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584589">ENVH 406 Extra Credit</a> <a href="https://canvas.uw.edu/courses/1580140/assignments/7584589">https://canvas.uw.edu/courses/1580140/assignments/7584589</a>	due by 1:29pm

Date	Details	Due
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584588">ENVH 406: IS-100.C: Introduction to Incident Command System Certificate</a> ( <a href="https://canvas.uw.edu/courses/1580140/assignments/7584588">https://canvas.uw.edu/courses/1580140/assignments/7584588</a> )	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7626202">ENVH 506 Extra Credit</a> ( <a href="https://canvas.uw.edu/courses/1580140/assignments/7626202">https://canvas.uw.edu/courses/1580140/assignments/7626202</a> )	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7584584">ENVH 506: Disaster research proposal</a> ( <a href="https://canvas.uw.edu/courses/1580140/assignments/7584584">https://canvas.uw.edu/courses/1580140/assignments/7584584</a> )	due by 1:29pm
	 <a href="https://canvas.uw.edu/courses/1580140/assignments/7612740">ENVH 506: IS-100.C: Introduction to Incident Command System Certificate</a> ( <a href="https://canvas.uw.edu/courses/1580140/assignments/7612740">https://canvas.uw.edu/courses/1580140/assignments/7612740</a> )	due by 1:29pm