

# ENV H 515 A Wi 22: Organ System Toxicology

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**Winter Quarter, 2022**

**MWF 11:30 am -12:20 pm**

**NOTE: As per 12/21/2021 guidance from the UW, Classes will be online for the first week of Winter quarter (1/3/2021 – 1/7/2021), and are currently scheduled to be in-person for the remainder of the quarter. Students will be notified if any changes to UW COVID-19 policies further affect in-person instruction.**

This year, Classes will take place in the Hybrid instruction model (in person and zoom lectures) due to the pandemic on Monday, Wednesday, and Friday 11:30-12:20 pm. The in-person classes will take place in HSB T530. The campus map can be found here [here](#) (<https://depts.washington.edu/disteche/images/healthsciencesmap.pdf>). The first class will take place on Monday, January 3rd at 11:30 am. All class sessions will also be recorded and posted on Canvas after each session. Please refer to the [Modules](#) page for the session-by-session schedule, course materials, assignments, and other course materials.

Zoom class link: <https://washington.zoom.us/j/93617211704>  
(<https://washington.zoom.us/j/93617211704>)

## **Course Instructor:**

Zhengui Xia, PhD,

Office: R-203

Telephone: 206-616-9433

Email: Zhengui Xia: [zxia@uw.edu](mailto:zxia@uw.edu); [\\_\(mailto:zxia@uw.edu\)](mailto:zxia@uw.edu)

## **Guest Lecturers:**

Hao Wang <[whyx2012@uw.edu](mailto:whyx2012@uw.edu)>

Julia Cui <juliacui@uw.edu>

Elaine Faustman <faustman@uw.edu>

Edward Kelly <edkelly@uw.edu>

Terry Kavanagh <tjkav@uw.edu>

Cecile Krejsa <[cmkrejsa@protonmail.com](mailto:cmkrejsa@protonmail.com) (<mailto:cmkrejsa@protonmail.com>)>

Toby Cole <tobycole@uw.edu>

## I. Course Overview

ENVH 515 is the second course of a three-course sequence (ENV H 514/515/516). The overall goal of the series is for students to gain a basic working knowledge of how chemicals interact with biological systems to produce adverse effects, i.e., the science of toxicology. ENV H 514 focuses on basic concepts and mechanisms of toxicology. This course (ENV H 515) focuses on organ toxicology and organ systems and is organized into modules according to target organs and/or organ systems. ENV H 516 focuses on specific agents.

## II. Learning Objectives

At the end of this course, the students will be able to:

1. Describe the response of cells to toxicant induced injury
2. Describe the anatomy and function of the liver and the GI tract and understand commonly used biomarkers of toxicant induced injury to these organs and the role of the microbiome
3. Describe the humoral and cellular components of the blood and bone marrow, and discuss common endpoints used to evaluate toxicant effects on the blood and bone marrow
4. Describe the major cell types and mediators involved in the immune system and how to assess their function in the context of toxic chemical exposure
5. Describe the anatomy and function of the kidney, and understand commonly used biomarkers of toxicant induced kidney injury
6. Describe the anatomy and function of the respiratory system, and the effects of inhaled toxicants on the lung
7. Describe the major cell types in the nervous system, the anatomy of blood brain barrier and the effects of toxicant exposure on nervous system development and function
8. Describe tests commonly used to evaluate behavioral toxicants, and the effects of neurotoxic chemicals on behavior
9. Define the models used to evaluate teratogenic potential, understand the basis for selective windows of susceptibility for developmental toxicants, describe the cellular anatomy of reproductive tissues

and the effects of toxicants on their function

10. Describe the anatomy and function of the cardiovascular system, and define of the process of atherogenesis and the role that nutrition, chemical exposure, and oxidative stress play in its pathophysiology
11. Discuss the effects of toxicant exposure toward the skin and sensory organs
12. Describe critical cell types, organs, and hormones in the endocrine system, and have knowledge of the effects of endocrine disrupting chemicals

### III. . Course Resources

Required Reading: All readings will be posted on the course Canvas site.

The recommended textbook for ENVH 515:

**[Casarett & Doull's Toxicology, The Basic Science of Poisons 9th Edition \(2019\)](https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462)**  
**[\\_ \(https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462\)](https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462)**

This textbook is also available as an eBook and can be accessed from UW Libraries Search <http://www.lib.washington.edu> [\\_ \(http://www.lib.washington.edu\)](http://www.lib.washington.edu) (Need to type the textbook information in the search box).

Direct access: **[Content available: McGraw-Hill's AccessPharmacy view license terms](https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462)**  
**[\\_ \(https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462\)](https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462)**.

If you wish to purchase a hard copy as a reference (optional), it can be obtained from various resources such as [www.amazon.com](http://www.amazon.com).

Students are strongly encouraged to read the corresponding book chapters for each class.

### IV. Grading

The final grade for this class will include the following components (total: 100 points):

Block I Exam (25 points) = 25%

Block II Exam (25 points) = 25%

Block III Final Exam (30 points) = 40%

Group Case Study Presentation = 10%

Grades will be converted into a 4.0 scale based on the calculations [here](#).

## **Group Case Study Presentations:**

Topics: The organ toxicity of environmental toxicants

Each student will participate in a group research project focused on a specific environmental toxicant. Each group will choose a toxicant from one of the following categories: heavy metals, pesticides, radioactive materials, plants extract, animal toxins, or other environmental pollutants. Group members will then work as a team to perform a literature search and develop a 15-minute presentation with Powerpoint slides to address one major organ toxicity of the toxicant.

The presentation should include the following information:

1. Background information about the toxicant (e.g. where does it come from, what is the exposure route of this toxicant, and what is the exposure concentration of this toxicant in the environment)

A description of how the toxicant enters the body and reaches the target organ, the targeted organ toxicity of this toxicant, and the mechanisms of specific organ toxicity

2. How does the body detoxify/eliminate this toxicant (if possible)? What are the therapeutic management options or preventive measures that one could take to mitigate the toxicity or reduce the exposure risks?

3. Any other information about the toxicant that you think is important for your peers to know

Students from each group will take turns to present their slides in class (15 min presentation + 5-10 min Q&A). Recommended numbers of slides: 15-20, including a title slide with all presenters' names, a conclusion slide, and a slide on references cited. Each member of the group is encouraged to do part of the presentation.

Suggestions on credible sources: primary literature (e.g. PubMed, Web of Science, UW Libraries), general search engines (e.g. Google), high-quality news sources (e.g. New York Times, BBC, CNN, etc.).

### **Grading rubric for the group presentations (10 points + 1 extra point) :**

The clarity in delivering the presentation (Can all present or choose representatives to present) (2 pts)

Focus and scope (being able to address all the key points) (2 pts)

Content (evidence of critical thinking and accurate evaluation of the topic) (3 pts)

Research (sources effectively and accurately support the statements) (1 pts)

Q&A (being able to address the questions from the audience accurately and thoroughly) (2 pts); active in asking questions to the presenting group (extra 1 pts)

Please sign up and choose your topics by 2/28/2022 at 11:59 pm.

Each group will grade the other groups' presentations and provide their feedback

Final score will be calculated by the scores from the instructor and the other groups; the extra 1 point will be graded by the instructor

Everyone in the group will receive the same grade, unless feedback from the group indicates that an individual member deserves either a lower or higher grade based on his/her contribution to the project

## V. Absence Policy

Students are expected to attend class and to participate in all graded activities, including midterms and final examinations. 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.

## VI. Access and Accommodations

Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs 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 are not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or [uwdrs@uw.edu](mailto:uwdrs@uw.edu) or visit the website:

<http://depts.washington.edu/uwdrs/> (<http://depts.washington.edu/uwdrs/>). DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s), and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

## VII. Religious Accommodations

Washington state law requires that UW develop a policy for the 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 form](https://registrar.washington.edu/students/religious-accommodations-request/) [\(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/).

## VIII. 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 \(WAC 478-120\)](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121) [\(https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121\)](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121). 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. In addition to earning a grade of zero on the assignment or exam, all cases will be referred to the University Disciplinary Committee. For more information, see the University of Washington Community Standards and Student [Conduct website](https://www.washington.edu/cssc/) [\(https://www.washington.edu/cssc/\)](https://www.washington.edu/cssc/).

## IX. Diversity and Inclusion

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 the community and mutual caring. Diverse backgrounds, embodiments, and experiences are essential to the critical thinking endeavor at the heart of university education. Therefore, we expect you to follow the UW Student Conduct Code in your interactions with your colleagues and me in this course by respecting the many social and cultural differences among us, which may include, but are not limited to: age, cultural background, disability, ethnicity, family status, gender identity and presentation, citizenship and immigration status, national origin, race, religious and political beliefs, sex, sexual orientation, socioeconomic status, and veteran status. Please talk with us right away if you experience disrespect in this class, and we will work to address it in an educational manner. [DCinfo@uw.edu](mailto:DCinfo@uw.edu) is a resource for students with classroom climate concerns.

We are co-creators of our learning environment. It is our collective responsibility to develop a supportive learning environment for everyone. Listening with respect and an open mind, striving to understand others' views, and articulating your own point of view will help foster the creation of this environment. We engage our differences with the intent to build community, not to put down the other and distance ourselves from the other. Being mindful to not monopolize the discussion and/or interrupt others will also help foster a dialogic environment. We are a learning community. As such, we are expected to engage

with difference. Part of functioning as a learning community is to engage in dialogue in respectful ways that support learning for all of us and that holds us accountable to each other.

**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.**

## X. Sexual Harassment

Sexual harassment is a form of harassment based on the recipient's sex that is characterized by:

1. Unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature by a person who has authority over the recipient when: Submission to such conduct is an implicit or explicit condition of the individual's employment, academic status, or ability to use University facilities and services, or Submission to or rejection of the conduct affects tangible aspects of the individual's employment, academic status, or use of University facilities.
2. Unwelcome and unsolicited language or conduct that creates an intimidating, hostile, or offensive working or learning environment, or has the purpose or effect of unreasonably interfering with an individual's academic or work performance.

If you believe that you are being harassed, or have observed harassment, you can report it to SPH using the [bias concerns link](https://sph.washington.edu/about/diversity/bias-concerns) [\\_\(https://sph.washington.edu/about/diversity/bias-concerns\)\\_](https://sph.washington.edu/about/diversity/bias-concerns). The University also has designated offices to help you: [SafeCampus](https://www.washington.edu/safecampus/) [\\_\(https://www.washington.edu/safecampus/\)\\_](https://www.washington.edu/safecampus/); [Office of the Ombud](https://www.washington.edu/ombud/) [\\_\(https://www.washington.edu/ombud/\)\\_](https://www.washington.edu/ombud/); [Title IX Investigation Office](https://www.washington.edu/titleix/report/) [\\_\(https://www.washington.edu/titleix/report/\)\\_](https://www.washington.edu/titleix/report/); and University Complaint Investigation and Resolution Office [\(UCIRO\)](https://www.washington.edu/compliance/uciro/) [\\_\(https://www.washington.edu/compliance/uciro/\)\\_](https://www.washington.edu/compliance/uciro/).

## XI. COVID-related expectations

Per UW policy, this class will be conducted in person. Therefore, unless you meet the criteria for accommodation from Disability Resources for Students (DRS) or a special arrangement approved by the SPH Office of the Dean that allows you to take the course remotely [[see student communications here](https://sph.washington.edu/sites/default/files/2021-08/UWSPH_RTC_Student-Email.pdf) [\\_\(https://sph.washington.edu/sites/default/files/2021-08/UWSPH\\_RTC\\_Student-Email.pdf\)\\_](https://sph.washington.edu/sites/default/files/2021-08/UWSPH_RTC_Student-Email.pdf)] you should only register for this class if you can attend in-person.

Please contact UW Disability Resources for Students (DRS) directly if you feel you may be eligible for an accommodation based on your status as an immunocompromised individual or based on other diagnosed physical or mental health conditions that might prevent you from being able to take classes in-person.

If you are a student enrolled in a program in SPH, and you are either living with an individual who is immunocompromised, OR you are unable to obtain a visa to travel to the US, you may be eligible for a “special arrangement” that will allow you to take this course remotely. Requests for special arrangements to take the class remotely should have been submitted to and approved by the Students and Academic Services team in the Office of the Dean before the beginning of the quarter. If you have questions about this type of arrangement, please reach out to Student and Academic Services by email at [sphas@uw.edu](mailto:sphas@uw.edu).

All UW students are expected to complete their [vaccine attestation](https://www.washington.edu/coronavirus/vaccination-requirement/) (<https://www.washington.edu/coronavirus/vaccination-requirement/>) before arriving on campus and to always follow the campus-wide face-covering policy. You are expected to follow state, local, and UW COVID-19 policies, and recommendations. 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](https://www.washington.edu/coronavirus/2021/12/02/thank-you-for-your-work-and-reminders-for-winter-quarter-message-to-seattle-campus-instructors/) (<https://www.washington.edu/coronavirus/2021/12/02/thank-you-for-your-work-and-reminders-for-winter-quarter-message-to-seattle-campus-instructors/>), 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) or calling 206-626-3344.

**No food or drinks are allowed in the classroom.**

**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. Thank you for your patience and support as we all transition together back to in-person learning!

## Session-by-Session Schedule

All sessions meet in HSB T-530 or zoom, MWF 11:30-12:20

01/03/22	Introduction of ENVH515 Organ System Toxicology	Xia
01/05/22	Toxicology of the GI system	Cui
01/07/22	Toxicology of the Liver I	Cui
01/10/22	Toxicology of the Liver II	Cui
01/12/22	Blood Toxicity	Cui
01/14/22	Cell injury and cell death	Wang
01/17/22	NO CLASS - Martin Luther King Day Holiday	

01/19/22	Immunotoxicology I	Wang
01/21/22	Immunotoxicology II	Wang
01/24/22	EXAM I (covers content from 01/03/21 through 01/21/21)	
01/26/22	Toxicology of the Kidney I	Kelly
01/28/22	Toxicology of the Kidney II	Kelly
01/31/22	Respiratory System Toxicology I	Kavanagh
02/02/22	Respiratory System Toxicology II	Kavanagh
02/04/22	Respiratory System Toxicology III	Kavanagh
02/07/22	Neurotoxicology I	Xia
02/09/22	Neurotoxicology II	Wang
02/11/22	Behavioral Toxicology	Cole
02/14/22	Developmental/Repro Toxicology I	Faustman
02/16/22	Developmental/Repro Toxicology II	Faustman
02/18/22	Developmental/Repro Toxicology III.	Faustman
02/21/22	NO CLASS - Presidents' Day Holiday	
02/23/21	EXAM II (covers content from 01/26/22 through 02/18/22)	
02/25/22	Cardiovascular Toxicology I	Cui
02/28/22	Cardiovascular Toxicology II	Cui
03/02/22	Toxicology of the Sensory Systems	Krejsa
03/04/22	Toxicology of the Skin	Krejsa
03/07/22	Endocrine System Toxicology I	Wang
03/09/22	Student presentation I	
03/11/22	Student presentation II	
3/16/22, 2:30-4:20	Final EXAM (covers content from 01/03/22 through 03/07/22)	

## Course Summary:

Date	Details	Due
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<https://canvas.uw.edu/courses/1515825> 9/13

Date	Details	Due
Mon Jan 3, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441464&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441464&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Jan 5, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441465&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441465&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Jan 7, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441466&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441466&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Jan 10, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441467&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441467&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Jan 12, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441468&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441468&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Jan 14, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441469&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441469&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Jan 17, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441470&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441470&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Jan 19, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441471&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441471&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Jan 21, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441472&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441472&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm

Date	Details	Due
Mon Jan 24, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441473&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441473&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441473&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
	 <a href="https://canvas.uw.edu/courses/1515825/assignments/7076569">Block Exam 1</a> <a href="https://canvas.uw.edu/courses/1515825/assignments/7076569">(https://canvas.uw.edu/courses/1515825/assignments/7076569)</a>	due by 12:20pm
Wed Jan 26, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441474&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441474&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441474&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Fri Jan 28, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441475&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441475&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441475&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Mon Jan 31, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441476&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441476&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441476&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Wed Feb 2, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441477&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441477&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441477&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Fri Feb 4, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441478&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441478&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441478&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Mon Feb 7, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441479&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441479&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441479&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm
Wed Feb 9, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441480&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> <a href="https://canvas.uw.edu/calendar?event_id=2441480&amp;include_contexts=course_1515825">(https://canvas.uw.edu/calendar?event_id=2441480&amp;include_contexts=course_1515825)</a>	11:30am to 12:30pm

Date	Details	Due
Fri Feb 11, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441481&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441481&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Feb 14, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441482&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441482&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Feb 16, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441483&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441483&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Feb 18, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441484&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441484&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Feb 21, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441485&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441485&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Feb 23, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441486&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441486&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
	 <a href="#">Block Exam 2</a> ( <a href="https://canvas.uw.edu/courses/1515825/assignments/7128368">https://canvas.uw.edu/courses/1515825/assignments/7128368</a> ) due by 12:20pm	
Fri Feb 25, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441487&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441487&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Feb 28, 2022	 <a href="#">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441488&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441488&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm

Date	Details	Due
Wed Mar 2, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441489&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441489&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441489&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Mar 4, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441490&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441490&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441490&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Mon Mar 7, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441491&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441491&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441491&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Wed Mar 9, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441492&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441492&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441492&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm
Fri Mar 11, 2022	 <a href="https://canvas.uw.edu/calendar?event_id=2441493&amp;include_contexts=course_1515825">ENV H 515 A Wi 22: Organ System Toxicology</a> ( <a href="https://canvas.uw.edu/calendar?event_id=2441493&amp;include_contexts=course_1515825">https://canvas.uw.edu/calendar?event_id=2441493&amp;include_contexts=course_1515825</a> )	11:30am to 12:30pm