

Course Syllabus


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W ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES


UNIVERSITY of WASHINGTON | SCHOOL OF PUBLIC HEALTH

Quarter: Winter 2023

Credits & Grading: 4 credits, graded

Time & Location: Wednesdays, 1230 to 1:20 PM [HSEB 215](#) 

(<https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4m5!3m4!1s0x0:0xada271dc122.310452>)

Fridays 12:30 to 2:20 PM [HSEB 235](#) 

(<https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4m5!3m4!1s0x0:0xada271dc122.310452>)

Instructor:



Chris Simpson, Professor

Office: Roo 2336

Email: simpson1@uw.edu (<mailto:simpson1@uw.edu>)

Phone: 206-543-3222

(<mailto:tmb@uw.edu>) **Office Hours:** By appointment

LAND ACKNOWLEDGEMENT

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.

WINTER QUARTER RESPIRATORY ILLNESSES - PROTOCOLS AND SAFETY

Winter quarter is a time of increased risk of acquiring respiratory illnesses including COVID, RSV, cold, and flu.

If you feel ill or exhibit respiratory or other symptoms, you should **not** come to class. Seek medical attention if necessary and notify your instructor(s) as soon as possible by email.

Please check your email daily **BEFORE** coming to class. If we need to conduct class remotely because the instructor or a guest speaker is unable to attend in person, we will send all registered students an email with a Zoom link for remote instruction or a plan for making up the class.

Additional recommendations include:

- o [Get boosted with the updated COVID-19 vaccines](http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-ku4dK1F60Qwx5sVB9F2zPf2PjPbEQN0oAXWTw4xyUlayD-3Dn6tkPV-b9qYPVKNS=) (<http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-ku4dK1F60Qwx5sVB9F2zPf2PjPbEQN0oAXWTw4xyUlayD-3Dn6tkPV-b9qYPVKNS=>). These vaccines are available at clinics and pharmacies, as well as [through UW Medicine](http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-rZLyUV3OKyCGDzGK2pj5QyxQq14YnSJSJLWoEiG_BskVghbuDCoOCaDQZDj1HhDtQ28=) (http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-rZLyUV3OKyCGDzGK2pj5QyxQq14YnSJSJLWoEiG_BskVghbuDCoOCaDQZDj1HhDtQ28=) and local health agencies.
- o [Get your annual flu shot](http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-p8AShT60UfuTPp6L1-t9MeMiS8rrCJoY1HdFNMDUpsMKUh95VFz6INtjfk3R2dEH3M=) (<http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-p8AShT60UfuTPp6L1-t9MeMiS8rrCJoY1HdFNMDUpsMKUh95VFz6INtjfk3R2dEH3M=>).
- o **Wear a high-quality mask in indoor public spaces and while traveling. Masks are strongly recommended the first two weeks of winter quarter.** High-quality masks help protect against a range of respiratory viruses, and are [available for free in locations on each UW campus](http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-vvPawo32qTEDivNHXudxfJ86KNJ7wSFb24jzmDKknFXp_Icn7BOiAk0vTZcfssVCQY=) (http://we.discover.uw.edu/NTI3LUFUI0yNjUAAAGIkoZ8-vvPawo32qTEDivNHXudxfJ86KNJ7wSFb24jzmDKknFXp_Icn7BOiAk0vTZcfssVCQY=).

- o **Take a coronavirus test if you have symptoms or have been exposed.** Rapid antigen tests are widely available for [free in at on campus locations linked here](#) [. \(https://www.washington.edu/coronavirus/testing/?mkt_tok=NTI3LUFIUI0yNjUAAAGIkoZ8-lh4rJkVTP0uu0x9Qjo03it8Dqjcg-b8MMF3oVqsuHG2uoxdCV_LSqQ4pXPG_I3dC3PI76N-P0Pk7a0LzK9p8iT0fsJ4PvzXS155og\)](https://www.washington.edu/coronavirus/testing/?mkt_tok=NTI3LUFIUI0yNjUAAAGIkoZ8-lh4rJkVTP0uu0x9Qjo03it8Dqjcg-b8MMF3oVqsuHG2uoxdCV_LSqQ4pXPG_I3dC3PI76N-P0Pk7a0LzK9p8iT0fsJ4PvzXS155og). The [Husky Coronavirus Testing \(http://we.discover.uw.edu/NTI3LUFIUI0yNjUAAAGIkoZ8-vzM5PdwrHbUB_QiTo_vUCpaMHj5R4-EPxZHeHpW885q6tKNP_evGy-Nqcx025qjyxc=\)](http://we.discover.uw.edu/NTI3LUFIUI0yNjUAAAGIkoZ8-vzM5PdwrHbUB_QiTo_vUCpaMHj5R4-EPxZHeHpW885q6tKNP_evGy-Nqcx025qjyxc=) voluntary research study is also available for UW students.
- o **Activate WA Notify on your phone** (http://we.discover.uw.edu/NTI3LUFIUI0yNjUAAAGIkoZ8-pPDyiN6GI5YtqHyjmQA3y8d4y3WLT-C66_TuWe9QeeuVV_YE2asMhxcqvx8m4XSZM=) to receive exposure notifications and so that you can anonymously let others know of their exposure if you test positive.

Brief Course Description:

A key element in maintaining a healthy human environment is Exposure Monitoring for contaminants. In this course students will develop a thorough understanding of the underlying principles, analytical methods and instrumentation used to determine the intensity of exposure to contaminants in various environmental media including air, soil, surfaces, and water, and for measurement of exposure markers in human specimens.

Course Structure:

This class taught in a hybrid format.

Pre-recorded lectures, readings and assignments are made available at the start of each week of quarter via the [Course Modules page \(https://canvas.uw.edu/courses/1612753/modules\)](https://canvas.uw.edu/courses/1612753/modules) on the canvas site. We recommend that you use this page to navigate the course.

The in-class sessions (Wednesdays, 1230 to 1:20 PM [HSEB 215](https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4b1!4m5!3m4!1s0x0:0xada271dc122.310452) [\), Fridays 12:30 to 2:20 PM \[HSEB 235\]\(https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4b1!4m5!3m4!1s0x0:0xada271dc122.310452\) \[\\)\]\(https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4b1!4m5!3m4!1s0x0:0xada271dc122.310452\) are used for you to ask any clarifying questions about the lecture materials and the assignments.](https://www.google.com/maps/place/47%C2%B039'05.9%22N+122%C2%B018'37.6%22W/@47.651636,-122.3126407,17z/data=!3m1!4b1!4m5!3m4!1s0x0:0xada271dc122.310452)

Course Objectives:

At the end of the course, students should be able:

1. To describe the strategy and rationale for environmental sampling and exposure monitoring, including the selection of appropriate sampling methods.
2. To demonstrate the application of principles and techniques for sampling air and contaminated surfaces, food, drinking water, and human specimens to exposure monitoring.
3. To choose and explain the proper chemical and physical analytical methods to be applied to these samples.
4. To implement standard methods of validation and evaluation to determine the strengths and limitations of each sampling and analytical method, and to decide whether results are sensible within those limitations.
5. To identify and describe the standard published references in environmental sampling and analysis for assessment of human exposure.

Course Texts:

Zhang, C. Fundamentals of Environmental Sampling and Analysis. Hoboken, NJ: John Wiley & Sons, 2007.

Electronic access to this text:

<http://washington.ebilib.com/patron/FullRecord.aspx?p=287305> [. \(http://washington.ebilib.com/patron/FullRecord.aspx?p=287305\)](http://washington.ebilib.com/patron/FullRecord.aspx?p=287305)

Ramachandran, G. Occupational Exposure Assessment for Air Contaminants. Boca Raton, FL: Taylor & Francis, 2005.

<http://washington.ebilib.com/offcampus.lib.washington.edu/patron/FullRecord.aspx?p=264072> [. \(http://washington.ebilib.com/offcampus.lib.washington.edu/patron/FullRecord.aspx?p=264072\)](http://washington.ebilib.com/offcampus.lib.washington.edu/patron/FullRecord.aspx?p=264072)

Note that you do not need to purchase these textbooks. pdfs of the relevant chapters are linked on each course module.

Course Requirements:

1. Reading assignments: Students should read the assigned readings for each module. Reading assignments will come from the required texts and provided handouts.
2. Recorded lectures: Students should view the recorded lectures for each module, prior to attending the in-class sessions.
2. Homework problems: Problem sets will be assigned, approximately once per week, and are to be completed by each student independently. Homework will be graded and returned in a timely fashion.

Basis for Grading:

The final grade will be determined based on scores from the assigned homework problems. There are 10 homework assignments for this course, each of which is weighted equally in determining your final grade.

Students with Disabilities:**Access and Accommodation**

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 not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at [206-543-8924](tel:206-543-8924) or [uwdrs@uw.edu \(mailto:uwdrs@uw.edu\)](mailto:uwdrs@uw.edu) or [disability.uw.edu \(http://disability.uw.edu/\)](http://disability.uw.edu). 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.

Academic Integrity <http://sph.washington.edu/students/academicintegrity/> [\(http://sph.washington.edu/students/academicintegrity/\)](http://sph.washington.edu/students/academicintegrity/)







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). We expect you to know and follow the university's policies on cheating and plagiarism, and the **SPH 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.

Religious Accommodations Policy

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/). 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/)."

Course Summary:

Date	Details	Due
Mon Jan 9, 2023	 ENV H 553 A Wi 23: Environmental Exposure Monitoring Methods (https://canvas.uw.edu/calendar?event_id=3046923&include_contexts=course_1612753)	3:30pm to 4:30pm
	 Assignment #1 (https://canvas.uw.edu/courses/1612753/assignments/7880411)	due by 5pm
Fri Jan 13, 2023	 Assignment #2 (https://canvas.uw.edu/courses/1612753/assignments/7880413)	due by 5pm
Fri Jan 20, 2023	 Assignment #3 (https://canvas.uw.edu/courses/1612753/assignments/7880414)	due by 5pm
Fri Jan 27, 2023	 Assignment #4 (https://canvas.uw.edu/courses/1612753/assignments/7880415)	due by 5pm
Wed Feb 1, 2023	 ENV H 553 A Wi 23: Environmental Exposure Monitoring Methods (https://canvas.uw.edu/calendar)	12:30pm to 1:30pm

Date	Details	Due
	event_id=3076877&include_contexts=course_1612753	
Fri Feb 3, 2023	 Assignment #5 (https://canvas.uw.edu/courses/1612753/assignments/7880416)	due by 5pm
Fri Feb 10, 2023	 Assignment #6 (https://canvas.uw.edu/courses/1612753/assignments/7880417)	due by 5pm
Fri Feb 17, 2023	 Assignment #7 (https://canvas.uw.edu/courses/1612753/assignments/7880418)	due by 5pm
Fri Feb 24, 2023	 Assignment #8 (https://canvas.uw.edu/courses/1612753/assignments/7880419)	due by 5pm
Fri Mar 3, 2023	 Assignment #9 (https://canvas.uw.edu/courses/1612753/assignments/7880420)	due by 5pm
Fri Mar 10, 2023	 Assignment #10 (https://canvas.uw.edu/courses/1612753/assignments/7880421)	due by 5pm