

**Health Science 320: Environment, Health and Technology
General Syllabus Fall Semester 2019**

Instructor: Rebecca Sommer
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Face to Face and Virtual Office Hours: Tuesdays 9:00^{am}-11:00^{pm}
Wednesdays 3:00-4:30^{pm}
Instructor available face to face and via phone/online
Additional times can be arranged by appointment

Course Description:

An analysis of the changing global environment, its relationship to human health and technology will be considered. Historical impact, current concerns, and future projections will be addressed. Selected topics include health effects of environmental concerns including radiation, water and air pollutants, antibiotics, emerging infectious diseases and global overpopulation. Case studies will be presented.

Required Text:

Nadakavukaren, Anne. 2011. *Our Global Environment, A Health Perspective*. 7th Edition. Waveland Press, Inc., 10-digit ISBN: 1-57766-686-0 or 13-digit ISBN 978-1-57766-686-8

Supplemental Reading Assignments:

Readings in addition to the text, such as journal articles, reports by governmental and nongovernmental agencies, or other online resources will be assigned most weeks. Supplemental readings will be accessed via Canvas.

Course Goals:

A goal of environmental sustainability is to improve the quality of human life while conserving natural resources, reducing pollution, and decreasing harm to the environment. This course seeks to facilitate your abilities to:

- 1) Recognize areas of interaction between human society and the natural environment.
- 2) Identify individual, social, cultural, and ecological factors that influence environmental sustainability.
- 3) Evaluate competing claims that inform environmental debates.
- 4) Develop and demonstrate awareness of environmental responsibility to encourage a more environmentally sustainable lifestyle for self and/or for practice as a healthcare professional.

Online Lectures:

Weekly online lectures (PowerPoint presentation with recorded audio) will be posted in Canvas. The lectures are provided in two formats: (1) as a PowerPoint file that can be downloaded and watched as a slide show with PowerPoint software or (2) a video file that can be simply clicked-on and watched with no additional software. The PowerPoint files are available in the Home section of Canvas and the video files are in the Assignment section (videos can't be posted in Home for some unknown reason).

Course Grades:

Derived from a percentage of total points possible, it is the amount of points earned/total points possible for the course. Each point carries equal weight.

Weekly Assignments (25 pts x 13 weekly assignments)	325 (49.1%)
Outline and annotated bibliography of Educational Presentation/Video/Brochure	25 (4.5%)
Educational Presentation/Video/Brochure	100 (18.2%)
Final Reflection Paper	<u>100</u> (18.2%)
	550 total points

A: 94.0-100%	B: 83.0-86.9%	C: 73.0-76.9%	D: 60.0-64.9%
A-: 90.0-93.9%	B-: 80.0-82.9%	C-: 70.0-72.9%	F: 59.0% or below
B+: 87.0-89.9%	C+: 77.0-79.9%	D+: 65.0-69.9%	

Late Work:

The course is online, however, please note that it is NOT “self-paced” in that there are specified due dates for each assignment (weekly assignments, the presentation/video/brochure, and the final reflection paper). **Students are encouraged to work ahead.**

Work not submitted by the deadline is subject to penalty. Typically, this is a reduction of one full letter grade (e.g. assignment docked from B+ to C+ = 87% points reduced to 77% points). I will work with students that have excused circumstances. An excused circumstance requires documentation (e.g. doctor’s note, obituary, coach’s list). I expect to hear from students in advance of missing a due date. Only a dire situation permits notifying me after the due date has passed.

Overview of Course Assignments:

Additional information will be given in Canvas for each assignment. To convey a general idea of the requirements of this course, there will be:

1. Weekly Learning Activities (Homework) to check on understanding and to help students focus on important aspects of each week’s lecture and reading materials. A part of each week’s assignment will strive to provide an exercise that can be translated into real-world action to improve the health of the environment/people.
2. Educational Presentation/Video/Brochure on an environmental topic of your choice. Although this project will be done for a general public audience, it requires a higher level of understanding of the material. Students will complete an outline and annotated bibliography for the content of their project prior to completion of the final product. Presentations such as PowerPoint lectures with recorded audio will be 15-20 minutes in length. Videos can be done as mini-documentaries, a “60 Minutes”-type news interview, or other formats as approved by the instructor, and will be approximately 10 minutes in length depending on the format. Brochures will be a standard tri-fold format as can be found in Word templates.
3. Reflection Paper (two-page, double-spaced) with the prompt: “What key concept or piece of information did you learn in this course AND how will you apply it to be more environmentally sustainable as a responsible citizen and/or as a healthcare professional?” The reflection paper will apply the learning experience to understanding of self, others, and/or the course concepts. It will convey meaningfulness of the experience to the student and to course learning objectives. It may connect past experiences or personal goals to the learning experience and should demonstrate ability of the student to develop a new way of thinking, and/or ability to question their own biases, stereotypes, preconceptions, or assumptions.

Course Schedule Fall 2019

	Topic	Learning Activity
Week 1 Sept. 3 – 6	What is the environment? Health Issues in Rural Environments	Read: <ul style="list-style-type: none"> • Textbook: pg. 127 and Section 6-1 <i>Microbial Killers</i> on pgs. 129-130 • <i>10 Facts on Preventing Disease Through Healthy Environments</i> Watch: <ul style="list-style-type: none"> • Topic 1: Environmental Health Lecture • <i>Determinants of Health: A Framework for Reaching Healthy People 2020 Goals</i> • <i>What is Environmental Science?</i> Complete: <ul style="list-style-type: none"> • Assignment 1 due Fri. Sept. 6 at 11:59^{pm}
Week 2 Sept. 9 – 13	Air Quality/Pollution	Read: <ul style="list-style-type: none"> • Textbook: Chap. 13, pgs. 341-377, and <i>Ozone Depletion</i>, Chap. 11, pgs. 285-288 Watch: <ul style="list-style-type: none"> • Topic 2: Air Quality Lecture • <i>NASA Study: First Direct Proof of Ozone Hole Recovery to Chemical Ban</i> Complete: <ul style="list-style-type: none"> • Assignment 2 due Fri. Sept. 13 at 11:59^{pm}
Week 3 Sept. 16 – 20	Water Quality/Pollution	Read: <ul style="list-style-type: none"> • Textbook: Chap. 15 pgs. 395-416, Chap. 16 pgs. 416-455, Chap. 17 pgs. 460, 462 and 489 • <i>Municipal Drinking Water Safety: The link between groundwater, pathogens, and public health</i> Watch: <ul style="list-style-type: none"> • Topic 3: Water Quality Lecture Listen: <ul style="list-style-type: none"> • NOAA Ocean Podcast: Episode 14 <i>Garbage Patches: Gyres Take our Trash Out to Sea</i> Complete: <ul style="list-style-type: none"> • Assignment 3 due Fri. Sept. 20 at 11:59^{pm}

<p>Week 4 Sept. 23 – 27</p>	<p>Global Climate Change</p>	<p>Read:</p> <ul style="list-style-type: none"> • Textbook: Chap. 11 pgs. 281-312 • Green New Deal Resolution <p>Watch:</p> <ul style="list-style-type: none"> • Topic 4: Global Climate Change Lecture • <i>Cap and Trade Explained in Two and a Half Minutes</i> • <i>Carbon Tax and Cap and Trade</i> <p>Listen:</p> <ul style="list-style-type: none"> • Audio Introduction to Rep. Ocasio-Cortez's Green New Deal <p>Complete:</p> <ul style="list-style-type: none"> • Assignment 4 due Fri. Sept. 27 at 11:59^{pm}
<p>Week 5 Sept. 30 – Oct. 4</p>	<p>Work on annotated bibliography for your Educational Brochure, Online Presentation, or Video on an environmental topic of your choice. (In place of a Topic 5.)</p>	<p>Read:</p> <ul style="list-style-type: none"> • Instructions Brochure, Presentation, or Video Assignment • Annotated Bibliography Rubric <p>Complete:</p> <ul style="list-style-type: none"> • <u>Outline with Annotated Bibliography</u> for Educational Online Presentation, Video, or Brochure project due Fri. Oct. 4 at 11:59^{pm}
<p>Week 6 Oct. 7 – 11</p>	<p>Emerging Infections and Antibiotics</p>	<p>Read:</p> <ul style="list-style-type: none"> • Textbook: <i>Microbial Killers</i> on pgs. 129-130, <i>Vectors of Disease</i> pgs. 186-192, <i>Battling Malaria</i> pgs. 194-195, <i>Dengue Fever Spreads as the World Warms</i> pgs. 200-201, and <i>Abusing a Valuable Resource</i>: pgs. 218-219 <p>Watch:</p> <ul style="list-style-type: none"> • Topic 6: Emerging Infections and Antibiotics Lecture • <i>Systems Thinking: A Cautionary Tale (Cats in Borneo)</i> • <i>GMO Mosquito Control</i> <p>Complete:</p> <ul style="list-style-type: none"> • Assignment 6 due Fri. Oct. 11 at 11:59^{pm}
<p>Week 7 Oct. 14 – 18</p>	<p>Medical Waste</p>	<p>Read:</p>

		<ul style="list-style-type: none"> Textbook: <i>Drugs Down the Drain</i>, pgs. 447-449 and <i>Medical Waste Tracking Act</i> pg. 481 <p>Watch:</p> <ul style="list-style-type: none"> Topic 7: Medical Wastes Lecture <i>The Drugs We Wash Away: Pharmaceuticals, Drinking Water and the Environment</i> <p>Complete:</p> <ul style="list-style-type: none"> Assignment 7 due Fri. Oct. 18 at 11:59^{pm}
Week 8 Oct. 21 – 25	Pesticides Childhood Exposures to Toxicants	<p>Read:</p> <ul style="list-style-type: none"> Textbook: Chap. 8, <i>Pesticide Resistance</i> pgs. 193-199, <i>Environmental Contamination</i> pgs. 202-214, and Chap. 7, <i>Toxic Substances</i> pgs. 153-181 Summary of the Toxic Substances Control Act (TSCA) <p>Watch:</p> <ul style="list-style-type: none"> Topic 8: Pesticides and Toxic Substances Lecture <p>Complete:</p> <ul style="list-style-type: none"> Assignment 8 due Fri. Oct. 25 at 11:59^{pm}
Week 9 Oct. 28 – Nov. 1	Carcinogens and Radiation	<p>Read:</p> <ul style="list-style-type: none"> Textbook: Chap. 6, <i>Cancer</i> pgs. 138-152, and Chap. 10, <i>Radiation</i> pgs. 243-275 Case Study: <i>Stephen's Story</i> <p>Watch:</p> <ul style="list-style-type: none"> Topic 9: Carcinogens and Radiation Lecture <p>Listen:</p> <ul style="list-style-type: none"> <i>Dark Lives Of "The Radium Girls" Left a Bright Legacy For Workers, Science</i> <p>Complete:</p> <ul style="list-style-type: none"> Assignment 9 due Fri. Nov. 1 at 11:59^{pm}
Week 10 Nov. 4 – 8	Work on Educational Brochure, Online Presentation or Video	<p>Read:</p> <ul style="list-style-type: none"> Instructions Brochure, Presentation, or Video Assignment Part 2 Brochure, Presentation, or Video Rubric <p>Complete:</p>

		<ul style="list-style-type: none"> • Educational Brochure, Online Presentation, or Video project due Fri. Nov. 8 at 11:59^{pm}
Week 11 Nov. 11 – 15	Genetically Modified Organisms	Read: <ul style="list-style-type: none"> • Textbook pgs. 91-92 Watch: <ul style="list-style-type: none"> • Genetically modified organisms intro video • <i>Genetically Modified Food: A Debate</i> Complete: <ul style="list-style-type: none"> • Assignment 11 due Fri. Nov. 15 at 11:59^{pm}
Week 12 Nov. 18 – 22	Food Quality	Read: <ul style="list-style-type: none"> • Textbook Chap 9 pgs. 215-241 • Intro and larger font areas of The Food Trust: <i>Access to Healthy Food and Why It Matters</i> Watch: <ul style="list-style-type: none"> • Topic 12: Food Quality Lecture Listen: <ul style="list-style-type: none"> • Science Friday: “Borax: It’s What’s For Dinner” Complete: <ul style="list-style-type: none"> • Assignment 12 due Fri. Nov. 22 at 11:59^{pm}
Week 13 Nov. 25 – 29	Food, Drug and Cosmetics Thanksgiving – Thurs. Nov. 28	Read: <ul style="list-style-type: none"> • <i>Sulfanilamide Disaster</i> Watch: <ul style="list-style-type: none"> • Topic 13: Food and Drug Administration Lecture • <i>American Chamber of Horrors</i> Complete: <ul style="list-style-type: none"> • Assignment 13 due Mon. Dec. 2 at 11:59^{pm}
Week 14 Dec. 2 – 6	Overpopulation Natural Disaster Refugees	Read: <ul style="list-style-type: none"> • Sections of Chapters 2, 3, & 4: pgs. 33-54, 61-72, 75, 84-90 Watch: <ul style="list-style-type: none"> • Topic 14: Population Lecture • <i>The Population Bomb?</i>

		<ul style="list-style-type: none"> • <i>The Uprooted</i> <p>Complete:</p> <ul style="list-style-type: none"> • Assignment 14 due Fri. Dec. 6 at 11:59^{pm}
Week 15 Dec. 9 – 13	Environmental and Health Inequities and Disparities	<p>Read:</p> <ul style="list-style-type: none"> • <i>Can We Create a Fair Shot at Health?</i> • CDC Health Disparities Summary • Environmental Justice FY 2017 Progress Report <p>Watch:</p> <ul style="list-style-type: none"> • Topic 15: Health Disparities Lecture • <i>Menominee Nation's Path to Health</i> <p>Complete:</p> <ul style="list-style-type: none"> • Assignment 15 due Fri. Dec.13 at 11:59^{pm}
Week 16 Dec. 16 – 20	Reflection Paper	<p>Read:</p> <ul style="list-style-type: none"> • Instructions for Final: Reflection Paper • Reflection Paper Rubric <p>Complete:</p> <ul style="list-style-type: none"> • Reflection Paper due Fri. Dec. 20 at 11:59^{pm}

This schedule is tentative & subject to modifications during the course of the semester

Students with Disabilities

In compliance with the Americans with Disabilities Act, students are encouraged to register with UWSP Disability and Assistive Technology Center (DACT) for assistance with accommodations. It is the student's responsibility to work with DATC to document permanent or temporary disability in order to determine eligibility and receive reasonable accommodations. The college cannot assume responsibility for providing accommodations or services to students who have not identified themselves as having a qualifying disability. Contact DACT at datctr@uwsp.edu, 715-346-3365, Room 609 Albertson Hall, 900 Reserve Street, Stevens Point, WI 54481.

Academic Honesty & Misconduct

Academic honesty is a core principle of learning and scholarship. When you violate this principle, you cheat yourself of the confidence that comes from knowing you have mastered the targeted skills and knowledge. You also hurt all members of the learning community by falsely presenting yourself as having command of competencies with which you are credited, thus degrading the credibility of the college, the program, and your fellow learners who hold the same credential.

All members of the learning community share an interest in protecting the value, integrity, and credibility of the outcomes of this learning experience. We also have the responsibility to censor behaviors that interfere with this effort. The following behaviors will be subject to disciplinary action:

Plagiarism - presenting someone else's words, ideas, or data as your own work.

Fabrication - using invented information, falsifying research or other findings.

Cheating - misleading others to believe you have mastered competencies or other learning outcomes that you have not mastered. Examples include but are not limited to:

1. Copying from another learner's work
2. Allowing another learner to copy from your work
3. Collaborating on an assessment (graded assignment or test) without permission from the instructor
4. Copying answers or other materials from the internet (e.g. Quizlet)
5. Taking a test for someone else or permitting someone else to take a test for you

Turnitin will be used to scan all materials submitted by students. Turnitin shows similarity to other materials, such as online content and past student papers and assignments. Students are not allowed to copy material from others (internet or other students). In addition, students are not allowed to turn in work that they completed for a different course.

Academic Misconduct - other academically dishonest acts such as tampering with grades, taking part in obtaining or distributing any part of an assessment, or selling or buying products such as papers, research, projects or other artifacts that document achievement of learning outcomes. Academic dishonesty is not acceptable. UWSP subscribes to the definitions of academic dishonesty provided by the National Association of Student Personnel Administrators. Academic misconduct in the University of Wisconsin System is defined by UWS Chapter 14. The complete text of the chapter is available to you from the Dean of Students or you can visit for more information.

Emergency Preparedness: See UW-Stevens Point Emergency Procedures at www.uwsp.edu/rmgt/Pages/em/procedures for details on all emergency response at UW-Stevens Point including Medical Emergencies (Red Phones), Fire, Tornado, other Severe Weather or Active Shooter.

The course facilitator reserves the right to make changes to syllabi, or course content at their discretion anytime during the semester. Any significant change will be documented in a revised syllabus and posted on CANVAS. It is the students' responsibility to know what changes have been made. It is also the student's responsibility to check official UWSP email, and/or CANVAS frequently for course announcements.