

SCI 215: Environmental Science

School of Health and Social Sciences

5 Credits

Effective Date Fall 2021

List any Pre-requisite or Co-Requisite: N/A

Access to the Internet is required.

All written assignments must be in Microsoft-Word-compatible formats.

*See the library's APA Style Guide tutorial for a list of resources that can help you use
APA style.*

Faculty Information

Professional experience information for instructors is found under *Faculty Information* in the online course menu.

Contact Information

Contact information for instructors is found under *Faculty Information* in the online course menu.

Course Description

This course explores environmental change on a global scale, emphasizing the fundamental concepts of matter, energy, and ecology as applied to contemporary concerns. Environmental issues impacting more than two dozen countries are illustrated in order to develop an international perspective on the environmental challenges facing our planet.

Course Resources

Required and recommended resources to complete coursework and assignments are found on the course [Reading List](#). Note: resources listed under "Required - Must Purchase" should be purchased from a vendor of the student's own choosing; resources listed under "Available from the Library" are available at no cost to students.

Students in Canada may purchase course resources from the [Canada Bookstore](#), and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

Course Outcomes

This course will prepare students to:

- Explain historical, environmental impacts to the earth, including scientific phenomena and human influence
- Reflect on diverse perspectives and solutions to contemporary, environmental issues

- Summarize ethical considerations involved in environmental legislative and policy decision-making on local and global levels

Additional Information

CORE CONCEPTS, KNOWLEDGE, AND SKILLS

- Diverse perspectives and solutions
- Environmental issues
- Ethical considerations
- Scientific phenomena

Grading Scale

The grades earned for the course will be calculated using City University of Seattle’s decimal grading system, found in the current University Catalog (<https://www.cityu.edu/catalog/>).

Grading rubrics with details on how each assignment will be graded are located under *Assignments* and/or in *My Grades* in the online course menu. Students should review the rubric for each assignment prior to completing their work in order to understand how it will be assessed.

<i>Overview of Required Assignments</i>	<i>% of Final Grade</i>
Course activities	30%
Presentation	30%
Research Paper	40%
TOTAL	100%

Course Assignments and Grading

The instructor will provide grading rubrics with more detail as to how this assignment will be graded.

Course Activities (30%)

Class participation through discussion is an integral part of this online course, although it is typically less formal than other work submitted throughout the course. Participation is defined as active engagement in a discussion or other online activity.

To provide a structure for balanced participation and allow you to maximize the benefit of the discussion boards, it is recommended that you follow these guidelines:

1. Post your responses to discussion questions in the first three days of the school week (Monday through Wednesday).
2. Post three or more thoughtful and topic-relevant comments to responses made by classmates during the last four days of the school week (Thursday through Sunday).
3. Respond to any questions that your instructor or peers have regarding your original post by the end of the school week.

Components	% of Grade
Quality of Responses	25%
Quantity of Responses	25%
Style and Mechanics	25%
Timeliness	25%
TOTAL	100%

Presentation (30%)

Students will design a presentation public service announcement (PSA) informing the public on a topic relating to course content. The PSA will inform the targeted audience of the topic or issue and may also attempt to convince the audience to have a change in beliefs or take action. The PSA may be submitted as a voiceover slide presentation or video, must be no longer than three minutes in length. Any exceptions may apply and are subject to instructor's approval. Students will be assessed on their ability to apply course concepts, synthesize supporting evidence, and communicate information that is accurate, organized, and credible.

In their presentation, students are expected to combine their own thoughtful analysis with facts, data, and information found in the textbook and at least three scholarly sources. Therefore, as in any scholarly work, students should not merely copy information from another author, but use evidence to support the contentions they have drawn from their findings and critically analyze related literature - this presentation has to be an analytical, not a summary of readings.

This presentation must meet APA requirements of format and style. Students must cite the sources of all ideas, facts, and information used that are not their own, even if they have put the information into their own words. Failure to do so is plagiarism, even if the oversight is unintentional.

Components	% of Grade
Organization and coherence	20%
Evidence and support	25%
Analysis and use of course concepts	25%
Visual design	10%
Style, mechanics and APA(citations, references, formatting)	20%
TOTAL	100%

Research Paper (40%)

Using the concepts covered in this course, students will write a five- to six-page, double-spaced research paper as part of the assignments to meet the learning objectives of this course. In their paper, students will explore in depth a subject of their interests related to the study of health and wellness and outline the impact and various perspectives of this topic as it relates to an individual, a family, and society. Students will identify any dimensions of wellness that are affected and explain the short- and long-term outcomes or forecast for the topic. Students may select their own topic or choose one from a list provided by the instructor. Students will be assessed on their ability to apply course concepts, synthesize supporting evidence, reflect on diverse perspectives, and write cohesive paragraphs including a thesis statement that is fully supported throughout the paper.

In their papers, students are expected to combine their own thoughtful analysis of the topic with information found in a minimum of three scholarly sources other than a textbook. Students need to keep in mind that this is to be an analytical paper, not simply a summary of their reading. Therefore, as in any scholarly writing, students should not merely copy information from another author, but use evidence to support the contentions they have drawn from their findings and critically analyze related literature - this paper has to be an analytical paper, not a summary of readings. This paper must meet APA requirements of format and style. Students must cite the sources of all ideas, facts, and information used that are not their own, even if they have put the information into their own words. Failure to do so is plagiarism, even if the oversight is unintentional.

Components	% of Grade
Organization and coherence	20%
Evidence and support	30%
Analysis and use of course concepts	30%
Style, mechanics and APA(citations, references, formatting)	20%
TOTAL	100%

Course Policies

Late Assignments

Per School of Health and Social Sciences policy, undergraduate students are required to submit all assignments by the due dates stated in the syllabus. A late assignment is one that is submitted after the due date and time or after any extension has expired.

If circumstances prevent a student from meeting the due date, the student is obliged to contact the instructor and request an extension at least 48 hours prior to the date the assignment is due. Emergency situations will be considered on a case-by-case basis. Being busy, pressured with outside work, or having competing academic commitments are not valid reasons to grant extensions. A student who receives an extension in advance of the due date and abides by the agreement with the instructor is not subject to late penalties.

Without prior arrangement with the instructor, students who submit assignments late will receive a 15 percent deduction in grade each day or part of the day that the assignment is late. For example, if the assignment is submitted two days late, 30 percent of the grade will be deducted. No late submission is accepted beyond 48 hours past the final day of the course, without instructor approval. Coursework received after one week (seven days) will not be graded and will receive a zero grade.

Participation

Participation is an active engagement in class discussions and activities in the form of sharing new ideas, examples and resources, as well as constructive disagreement and incorporation of course materials and concepts in comments. This requires frequent monitoring of the discussion forum, timely responses, integration of course material and other sources, and ongoing conversations that extend, modify, and add to understanding, creating a vibrant learning community.

Participation through course activities and discussions to exchange knowledge, ideas, and thoughts is an integral, mandatory part of this course. It enhances the student's learning process and experience in this course. Lack of participation will result in a reduction in grade (see grading rubric).

Professional Writing

Assignments require error-free writing that uses standard English conventions and logical flow of organization to address topics clearly, completely, and concisely. CityU requires the use of APA style.

University Policies

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the [University Catalog](#) that is linked from the CityU Web site.

Antidiscrimination

City University of Seattle and its staff and faculty are committed to supporting our students. We value equity, diversity, and inclusion as a way of life as well as the educational opportunities it provides. CityU will not tolerate any form of discrimination based on race, color, ethnicity, sexual orientation, gender identification, socioeconomic status, or religious values. If you have experienced any discrimination based on any of the above, we encourage you to report this to the University. Please report this to your instructor. If you do not feel safe reporting this to your instructor, please report to the Provost or to the Vice President of Student Affairs.

Non-Discrimination & Prohibition of Sexual Misconduct

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or

complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to the Title IX Coordinator. For a complete copy of the policy or for more information, visit <https://my.cityu.edu/titleix> or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person to person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at <https://www.cityu.edu/discover-cityu/about-cityu/> under the Policies section or at <https://www.cityuniversity.ca/about/>.

Religious Accommodations

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

Academic Integrity

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. You are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the [University Catalog](#) in the section titled *Scholastic Honesty* under *Student Rights & Responsibilities*.

Attendance

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.

Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if s/he is present at any time during the class session. For online classes, a student has attended if s/he has posted or submitted an assignment. A complete copy of this policy can be found in the [University Catalog](#) in the section titled *Attendance Policy for Mixed Mode, Online and Correspondence Courses*.

Support Services

Disability Services Accommodations Statement

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at disability@cityu.edu or 206.239.4752 or visit the [Disability Support Services](#) page in the my.cityu.edu portal. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

Library Services

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the [Ask a Librarian](#) service, or access [library resources and services online](#), 24 hours a day, seven days a week.

Smarthinking

As a CityU student, you have access to 10 free hours of online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at help@cityu.edu to request your user name and password.

Course Schedule

Course Session/ Date	MODULE(S), TOPICS AND ASSIGNMENTS	READINGS
1	Introduction to environmental science DUE: Student Introductory Assignment (SIA) Course activities	Ch. 1 & 2
2	Ecosystem, biodiversity, and evolution DUE: Course activities	Ch. 3 & 4
3	Biodiversity and climate DUE: Course activities	Ch. 5 & 7
4	Sustaining biodiversity DUE: Course activities	Ch. 9 & 10
5	Nonrenewable and renewable resources DUE: Course activities	Ch. 14 & 15
6	Air quality and climate change DUE: Course activities Presentation	Ch. 18 & 19
7	Solid and hazardous waste DUE: Course activities	Ch. 20 & 21
8	Water security DUE: Course activities	Ch. 13

9	Food security DUE: Course activities	Ch. 12
10	Environmental security DUE: Course activities Research paper	Ch. 23

Rubrics

Course activities

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Percentage scale:	0.00 – 74.99%	75-00 – 81.99%	82.00 - 91.99%	92.00- 100%
Scaled score	0.0 – 1.9	2.0 – 2.6	2.7 - 3.6	3.7 - 4.0
Quality of responses – 25%	Superficial and undeveloped analysis; No insight or thoughtfulness; Off topic; Never addresses instructor’s comments to original posts; No connections are made to previous and current sessions’ concepts and materials; No references to readings;	Scattered and poorly developed analysis rarely supported by academically appropriate resources; Few, if any new ideas or connections made to previous and current sessions’ concepts and materials; Mostly anecdotal examples with	Generally competent analysis, supported by various academically appropriate resources; Some new ideas or connections to previous and current sessions’ concepts and materials; Most of the time addresses instructor’s	Rich in content, thoughtful and insightful problem analysis well supported by various academically appropriate resources; Detailed new ideas with connections made to previous sessions and/or real life situations; Always

	Obvious grammatical or stylistic errors, making understanding difficult.	no references to readings; Rephrases or summarizes other postings; Sometimes addresses instructor's comments to original posts; Serious grammatical errors interfering with content.	comments to original posts; References materials provided by instructor; Grammatical or stylistic errors do not interfere with content.	addresses instructor's comments to original posts; References materials, other than those provided by instructor; Few grammatical or stylistic errors.
Quantity of responses – 25%	Some, or all, required quality posts missing.	Initial post and fewer than minimum number of required quality posts.	Required minimum number of quality posts.	Exceeds minimum number of required quality posts.
Timeliness of responses – 25%	All posts submitted at the last minute without allowing for response time.	Posts submitted on fewer than three days of the discussion time.	Posts submitted on three different days of the discussion time.	Posts submitted on more than three days of the discussion time.
Style and mechanics (25%)	Obvious grammatical or stylistic errors, making understanding difficult style. Uses casual language. Includes unnecessary information.	Serious grammatical errors interfering with content. Mostly uses concise language and includes very little unnecessary information.	Several grammatical or stylistic errors. Uses concise language with no unnecessary information. Almost always references credible sources to support ideas	Few grammatical or stylistic errors. Uses concise and compelling language with no unnecessary information. Transitions in writing and flow are smooth and

	Does not reference credible sources to support ideas	Attempts to reference credible sources to support ideas		clear. Always references credible sources to support ideas
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Presentation

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Percentage scale:	0.00 – 74.99%	75.00 – 81.99%	82.00 - 91.99%	92.00- 100%
Scaled score	0.0 – 1.9	2.0 – 2.6	2.7 - 3.6	3.7 - 4.0
Organization and coherence (20%)	Is unclear with no or minimal organization, so ideas appear to be arranged in a random order. Few or inappropriate transitions between paragraphs, and ideas are not developed clearly. Does not appropriately respond to the assignment.	Minimal organization so ideas appear as a list. Transitions between ideas are minimal, and development of ideas may lack coherence. Not all aspects of the assignment are addressed.	Follows a logical organization. Ideas are developed but not all pertain directly to the topic. Topic is communicated clearly but not completely, and most or all aspects of the assignment are addressed.	Uses logical structure with introduction, body, and conclusion. Sophisticated development of one idea to another, and reader is guided through the progression of ideas. Clearly communicated topic, and all aspects of assignment are addressed.
Evidence and support (25%)	Does not attempt to use evidence to support topic, or evidence provided does not support topic. Uses irrelevant details or little supporting evidence, generalizing and	Use of evidence is minimal but does support topic. Often supports points through generalization, and examples are not relevant or explained.	There is evidence to support almost every point. Offers support but requires more interpretation and explanation of the evidence.	Every point is clearly supported by strong evidence. Uses evidence appropriately and effectively.

	providing more of a summary than an analysis.			
Analysis and use of course concepts (25%)	Does not attempt to explain how the evidence relates to topic. Superficial and poorly developed analysis. Little or no connections are made to course concepts. Uses few sources, may misunderstand them, and lacks critical thinking. No or minimal scholarly references.	Analysis of the evidence stretches its meaning to support topic. Some new ideas and insight, but lacks depth and detail. Incorporates some course concepts, but accuracy and development are not consistent. Shows basic understanding of sources but does not critically evaluate them. Incorporates few or no scholarly references.	Analysis explains how the evidence supports the topic in most cases. Analysis reflects insight but is not fully developed. Incorporates many course concepts but sometimes does not develop them. Shows careful reading of sources but little or no critical evaluation. Incorporates adequate or minimum number of scholarly references to support analysis.	Analysis shows a strong relationship between the evidence and the topic. Analysis is insightful and original. Incorporates course concepts accurately, consistently, and frequently. Critically evaluates sources. Incorporates numerous or more than the minimum number of scholarly references required to support analysis.
Visual design (10%)	Visuals are unattractive, unclear, and/or distracting. Visuals are unrelated to the topic and make little or no use of color, space, or the capabilities of the application.	Visuals are sometimes unattractive, unclear and/or distracting and are weakly related to the topic. Visuals make use of space, color and the capabilities of	Visuals are attractive, informative and engaging and reinforce and support topic. Visuals make good use of color, space and the capabilities of the	Visuals are attractive, informative, engaging and creatively designed/applied . They reinforce, support and enhance understanding of the topic, and

	Formatting makes it very difficult to read the material.	application in ways that are unwise and/or distracting. Formatting complements the content but is often hard to read.	application without overwhelming the audience. Formatting complements the content.	they make good use of color and space that maximizes the capabilities of the application without overwhelming the audience. Formatting enhances readability and content.
Style, mechanics, and APA (20%)	Contains spelling, punctuation, and/or grammatical errors, so understanding is difficult. Contains numerous awkward or ungrammatical sentences, and sentence structure is simple or monotonous. Misuses words, or uses words that are too vague and abstract or too personal and specific for the topic. Format and references are incomplete and have many errors in APA style.	Contains spelling, punctuation, and/or grammatical errors which may temporarily confuse the reader, but does not generally impede the overall understanding. Sentence structure generally correct but may be wordy, unfocused, repetitive, or confusing. Uses relatively vague or general words and sometimes inappropriate words. Format and references have some errors in APA style and/or is incomplete.	Contains spelling, punctuation, and/or grammatical errors, but does not impede understanding. Sentences generally clear, well structured, and focused, but some may be awkward or ineffective. Generally, uses words accurately and effectively, but sometimes may be too general. Format and references are complete and have few errors in APA style.	Almost entirely free of spelling, punctuation, and/or grammatical error. Sentences are varied, clearly structured, carefully focused, and fits assignment's purpose and audience. Words chosen for their precise meaning and an appropriate level of specificity is used. Format and references are in correct APA style and are complete.

Research paper

	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Percentage scale:	0.00 – 74.99%	75-00 – 81.99%	82.00 - 91.99%	92.00- 100%
Scaled score	0.0 – 1.9	2.0 – 2.6	2.7 - 3.6	3.7 - 4.0
Organization and coherence (20%)	Is unclear with no or minimal organization, so ideas appear to be arranged in a random order. Few or inappropriate transitions between paragraphs, and ideas are not developed clearly. Does not appropriately respond to the assignment.	Minimal organization so ideas appear as a list. Transitions between ideas are minimal, and development of ideas may lack coherence. Not all aspects of the assignment are addressed.	Follows a logical organization. Ideas are developed but not all pertain directly to the topic. Topic is communicated clearly but not completely, and most or all aspects of the assignment are addressed.	Uses logical structure with introduction, body, and conclusion. Sophisticated development of one idea to another, and reader is guided through the progression of ideas. Clearly communicated topic, and all aspects of assignment are addressed.
Evidence and support (30%)	Does not attempt to use evidence to support topic, or evidence provided does not support topic. Uses irrelevant details or little supporting evidence, generalizing and providing more of a summary than an analysis.	Use of evidence is minimal but does support topic. Often supports points through generalization, and examples are not relevant or explained.	There is evidence to support almost every point. Offers support but requires more interpretation and explanation of the evidence.	Every point is clearly supported by strong evidence. Uses evidence appropriately and effectively.

<p>Analysis and use of course concepts (30%)</p>	<p>Does not attempt to explain how the evidence relates to topic. Superficial and poorly developed analysis. Little or no connections are made to course concepts. Uses few sources, may misunderstand them, and lacks critical thinking. No or minimal scholarly references.</p>	<p>Analysis of the evidence stretches its meaning to support topic. Some new ideas and insight, but lacks depth and detail. Incorporates some course concepts, but accuracy and development are not consistent. Shows basic understanding of sources but does not critically evaluate them. Incorporates few or no scholarly references.</p>	<p>Analysis explains how the evidence supports the topic in most cases. Analysis reflects insight but is not fully developed. Incorporates many course concepts but sometimes does not develop them. Shows careful reading of sources but little or no critical evaluation. Incorporates adequate or minimum number of scholarly references to support analysis.</p>	<p>Analysis shows a strong relationship between the evidence and the topic. Analysis is insightful and original. Incorporates course concepts accurately, consistently, and frequently. Critically evaluates sources. Incorporates numerous or more than the minimum number of scholarly references required to support analysis.</p>
<p>Style, mechanics, and APA (20%)</p>	<p>Contains spelling, punctuation, and/or grammatical errors, so understanding is difficult. Contains numerous awkward or ungrammatical sentences, and sentence structure is simple or monotonous. Misuses words, or uses words that</p>	<p>Contains spelling, punctuation, and/or grammatical errors which may temporarily confuse the reader, but does not generally impede the overall understanding. Sentence structure generally correct but may be wordy,</p>	<p>Contains spelling, punctuation, and/or grammatical errors, but does not impede understanding. Sentences generally clear, well structured, and focused, but some may be awkward or ineffective. Generally, uses words</p>	<p>Almost entirely free of spelling, punctuation, and/or grammatical error. Sentences are varied, clearly structured, carefully focused, and fits assignment's purpose and audience. Words chosen for their precise meaning and an</p>

	<p>are too vague and abstract or too personal and specific for the topic. Format and references are incomplete and have many errors in APA style.</p>	<p>unfocused, repetitive, or confusing. Uses relatively vague or general words and sometimes inappropriate words. Format and references have some errors in APA style and/or is incomplete.</p>	<p>accurately and effectively, but sometimes may be too general. Format and references are complete and have few errors in APA style.</p>	<p>appropriate level of specificity is used. Format and references are in correct APA style and are complete.</p>
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