

ENVR 2000 *Environmental Science 2 – Issues*

Fall 2026

Department of Environment and Geography

Clayton H. Riddell Faculty of Environment, Earth, and Resources

University of Manitoba



**University
of Manitoba**

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Course Details

Section:	A02
Number of credit hours:	3
Class times & days of week:	Tuesday and Thursdays, 10:00 – 11:15 September 10 – December 10, 2026
Location:	315 Wallace
Prerequisites:	ENVR 1000 or BIOL 1340

Instructor name:	Dr. Juan Jose Aveiro Talavera, PhD
Preferred form of address:	Juan Jose
Office location:	212 Sinnott
Office hours:	Tuesdays 1:00 to 2:30 pm (by arrangement in person or zoom call)
Email:	juan.aveirotalavera@umanitoba.ca

Dr. Juan José Aveiro Talavera, M.Sc., Ph.D.

I am an alumnus of the University of Manitoba. After completing my PhD, I took on a Post-Doctoral Position at the University, contributing to teaching in the Faculty of Environment, Earth, and Resources. As part of the Aboriginal Environmental Stewardship Program, I taught Biogeography and Ecosystem Management courses, adapting the curriculum to the boreal forest conditions in Split Lake, Manitoba. This pioneering initiative, the first of its kind, provided a diploma program on-site in an Aboriginal community, fostering student success.

I also am a Veterinarian specialized in Animal Reproduction completing a Master's of Science from the University of Missouri, Columbia, U.S.A. At the University of Missouri, I was an Intern in Medicine and Surgery at the Veterinary Teaching Hospital. I hold a PhD degree from the Faculty of Environment, Earth, and Resources at the University of Manitoba, focusing on promoting the sustainability of human livelihoods. My thesis incorporated Canadian expertise into an ecosystem management framework for Paraguay, South America. The project required extensive consultation and collaboration with local landowners, NGOs, and other stakeholders to determine societal risk factors that contribute to, and might be worsened by, environmental change.

Over the past decade, I served as a project manager for Manitoba Hydro International Ltd. (MHI) at the Paraguayan office branch in South America. In this capacity, I utilized my Ecosystem Management expertise developed during my PhD, and honed my skills in business development and project management, thereby successfully leading and overseeing significant MHI projects.

Through these experiences, I have honed my environmental management, communication, organizational, negotiation, and teaching skills. I am eager to bring my expertise to this institution as an Instructor.

Traditional Territories Acknowledgement

The University of Manitoba campuses are located on original lands of Anishinaabe, Cree, Oji-Cree, Dakota, and Dene peoples, and on the homeland of the Métis Nation. We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of good-faith reconciliation and collaboration.

Equity and Inclusion Commitment

[Shared with the permission of Dr. Brianne M. Collins]

Care: Who you are, where you have been/are going, how your current circumstances are affecting you, what you think and feel, what you are interested in and curious about, and your overall well-being matter and were key considerations (and inspiration!) for how I designed this course.

Flexibility & Agency: There are multiple ways to engage in this course to accommodate your personal circumstances and preferences. Where possible, you will be given the opportunity to make decisions about what and how you learn.

Anti-Oppression: I honour your identities (e.g., race, gender, sexual orientation, romantic orientation, class, size, ability, etc.) and commit to interrupting any form of oppression based on these categories and amplifying under-represented voices.

About the Course

The goal of this course is to explore the complexities and interconnectedness of environmental issues through a review of the structure and function of natural systems, leading to a fuller understanding of the problems and multi-dimensional solutions available.

Learning Objectives

Students will be fluent in the basic terminology of the discipline, able to comment on complex environmental issues, have an in-depth understanding of environmental problems and potential solutions, and have demonstrated experience thinking about and working towards solutions to environmental problems on local and global scales.

Textbook and Reading Materials

Required Text: *Environment: The Science Behind the Stories, 4th Canadian Edition*, Withgott, Laposata, Murck and Havelka (Eds.), Pearson Canada. ISBN:9780135404317.

Physical copies are available at the UM Bookstore (University Centre). There is also a less expensive electronic version (e-book) provided through [Pearson+](#), which can also be purchased at the Bookstore. Other reading materials will be posted as PDFs to the UM Learn course website.

Course Technology and Communication

Course resources: Course materials such as lecture slide decks, and miscellaneous resources will be posted to the ENVR 2000 site on UM Learn.

Online learning: Please make sure you have working access to your student UM Zoom account by visiting <https://umanitoba.ca/about-um/tools-working-remotely>. While this is an in-person course, there may be

unforeseen circumstances that require a lecture to be held over Zoom, either synchronous (i.e., during scheduled class time) or pre-recorded for later viewing.

Communication: General course communications outside of the classroom will be sent by email or posted at UM Learn. The University requires all students to activate an official University email account. You are required to obtain and use your U of M email account for all communication between yourself and the university.

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy. Full details of the Electronic Communication with Students are accessible at: <https://umanitoba.ca/governance/governing-documents-students#electronic-communication-with-students>

Student Guidelines

Attending class: I strongly recommend you attend class and ask questions. I encourage dialogue within the classroom, but ask that you always remain respectful. While I do post the lecture slides before each class on UM Learn, **it is in your best interest to attend class**. You will get the most out of this course if you make efforts to attend class, engage with the material, ask questions and participate in discussions and exercises.

Voluntary withdrawal: The voluntary withdrawal (VW) deadline for this course is **November 24, 2026**.

IMPORTANT DATES IN FALL 2026

September 10 – December 10 – Scheduled classes (A02 – Tuesday and Thursday 10:00 – 11:15)

November 9 – 13 - Fall Term Break; No class

November 24 - Voluntary Withdrawal Deadline

December 10 – Last day of class

December 12 – 23 – Final Examination Period (Final Exam date TBA)

COURSE DELIVERY AND EVALUATION CRITERIA

The format of the course delivery includes in-person lectures; 2 tests (delivered in class), and a final examination scheduled by the Registrar.

The tests are based a mix of multiple choice, true/false and short answer questions over a 50 minute testing period. They are delivered at the start of the lecture period. There are no lectures on test days.

The final examination is scheduled by the Registrar during the Fall examination period. The date of the final exam is current TBA but typically is posted around the end of November. Go to <https://umanitoba.ca/registrar/final-exams> where exam details are posted.

Each test is closed book and is NOT cumulative. Each test is worth 25% toward your final grade in the course. The final examination IS cumulative covering ALL topics in the course. It is worth 50% toward the final course grade.

Dates for the Tests are as follows:

Test 1 – October 13 (worth 25%) – IN CLASS covers topics from Chapters 1, 3, 7, 9,10 and 11

Test 2 – November 5 (worth 25%) – IN CLASS covers topics from Chapters 12, 13, and 14

Final Examination (worth 50%) – Scheduled by the Registrar and cumulative covering ALL course topics; greater emphasis on topics not covered in tests 1 and 2.

IF YOU MISS A TEST OR THE FINAL EXAMINATION

Students who are unable to meet a course requirement due to medical circumstances are required to:

Contact your instructor if it pertains to a missed test;

Contact a student advisor for a missed final exam (scheduled in the final examination period);

YOU MUST:

Email your instructor/advisor as soon as possible **AND WITHIN 48 HOURS**; and

provide documentation that supports your request (medical, compassionate grounds etc.)

GRADING SCALE

Letter grades will be assigned at the completion of the course, as follows:

A+	Greater than 90%	C+	65-69%
A	80-89%	C	60-64%
B+	75-79%	D	50-59%
B	70-74%	F	Less than 50%

ACADEMIC SUPPORTS

Academic Integrity refers the values on which good academic work must be founded: honesty, trust, fairness, respect and responsibility. Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.

Students found to have breached the regulations related to any form of academic misconduct including but not limited to impersonation, collusion, plagiarism and/or cheating are subject to academic investigations of misconduct that could include grades of “0” on quizzes/exam and possibly academic suspension.

A Note about Copywrite Materials – I will provide you access to lecture notes. Students are required to adhere to copywrite by ensuring they do not reproduce this information outside of the University of Manitoba learning environment and to any person not registered in the course. This includes (but not limited to): video recordings, class notes, quizzes, tests and/or examinations.

It is solely your responsibility to be aware of the Academic Integrity Policy and consequences of violating it. The policy is available in the General Calendar, accessible on the UM website.

STUDENT ACCESSIBILITY SERVICES

The University of Manitoba is committed to providing all students equal access to learning opportunities. “This means that our classroom, our virtual spaces, our practices, and our interactions should be as inclusive as possible. Mutual respect and the ability to listen to others are crucial to universal learning.”

Student Accessibility Services (SAS) is the office that works with students who have permanent, chronic, or temporary disabilities to provide and/or arrange reasonable accommodations.

Students who have, or think they may have, a disability (e.g. mental health, attention, learning, vision, hearing, physical, medical or temporary), are invited to contact Student Accessibility Services to arrange a confidential discussion at (204) 474-7423 (V), (204) 474- 9790 (TTY) or student_accessibility@umanitoba.ca. Make your instructor aware of any accommodations early in the course.

Class Schedule

The schedule of units for this course is subject to change at the instructor’s discretion, as per Section 2.8 of the Responsibilities of Academic Staff with Regard to Students ([ROASS](#)) Procedure. Quiz dates will *not* change. Due to quizzes and other events/exercises taking up various lecture slots, a given unit may not be taught within the specified week suggested by the schedule below.

Week	Dates	Unit	Readings
1	Sep 10	Syllabus Review An Introduction to Environmental Science	Chapter 1
2	Sep 15–17	Earth Systems & Ecosystems	Chapter 3
3	Sep 22–24	Soils and Soil Resources Conservation of Species and Habitats	Chapter 7 and 9
4	Sep 29 Oct 1	Forest and Forest Management	Chapter 10
5	Oct 6-8	Fresh Water Systems and Water Resources	Chapter 11
6	Oct 13–15	<i>Test 1</i> Marine and Coastal Systems	Chapter 12
7	Oct 20–22	Marine and Coastal Systems Atmospheric Science and Air Pollution	Chapter 12, 13
8	Oct 27–29	Atmospheric Science and Air Pollution Global Climate Change	Chapter 13, 14
9	Nov 3–5	Global Climate Change Test 2	Chapters 14
10	Nov 9–13	Fall Break	
11	Nov 17-19	Fossil Fuels: Energy Use and Impacts	Chapter 15
12	Nov 24–26	Energy Alternatives Managing Our Waste	Chapters 16 and 18
13	Dec 1–3	<i>Guest Speaker</i> Sustainable Agriculture	Chapter 8
14	Dec 8-10	Sustainability and the Way Forward	Chapter 21

Schedule A - Academic Supports

Writing and Learning Support: The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.

You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor's feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at: <http://umanitoba.ca/student/academiclearning/>

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

University of Manitoba Libraries (UML) - As the primary contact for all research needs, your liaison librarian (if they weren't recently fired by Central Administration) can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A complete list of liaison librarians can be found by subject: <http://bit.ly/WcEbA1> or name: <http://bit.ly/1tJ0bB4>.

In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals. For a listing of all libraries, please consult the following: <http://bit.ly/1sXe6RA>. When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries' homepage: www.umanitoba.ca/libraries

Mental Health

For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.

Student Counselling Centre: Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. <http://umanitoba.ca/student/counselling/>; 474 University Centre; S207 Medical Services; (204) 474-8592

Student Support Case Management: Contact the Student Support Case Management team if you are concerned about yourself or another student and don't know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team. <http://umanitoba.ca/student/case-manager/index.html>; 520 University Centre; (204) 474-7423

University Health Service: Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation. <http://umanitoba.ca/student/health/>; 104 University Centre, Fort Garry Campus; (204) 474-8411 (Business hours or after hours/urgent calls)

Health and Wellness: Contact our Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault. <http://umanitoba.ca/student/health-wellness/welcome.html>; 469 University Centre; (204) 295-9032

Live Well @ UofM: For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site: <http://umanitoba.ca/student/livewell/index.html>

Copyright Information

All students are required to respect copyright as per Canada's *Copyright Act*. Staff and students play a key role in the University's copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community. For more information: <http://umanitoba.ca/copyright>

Rights and Responsibilities

Your rights and responsibilities: As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The [Academic Calendar](http://umanitoba.ca/student/records/academiccalendar.html) <http://umanitoba.ca/student/records/academiccalendar.html> is one important source of information. View the sections *University Policies and Procedures* and *General Academic Regulations*.

While all of the information contained in these two sections is important, the following information is highlighted.

If you have questions about your grades, talk to your instructor. There is a process for term work and final **grade appeals**. Note that you have the right to access your final examination scripts. See the

Registrar's Office website for more information including appeal deadline dates and the appeal form: <http://umanitoba.ca/registrar/>

You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the **Academic Integrity** regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support <http://umanitoba.ca/academicintegrity/> View the **Student Academic Misconduct** procedure for more information.

The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected conduct yourself in an appropriate respectful manner. Policies governing behavior are included in the next section.

Policies and Services Information

Respectful Work and Learning Environment:

http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Student Discipline

http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html and,

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

If you experience **Sexual Assault** or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The **Sexual Assault** policy may be found at:

http://umanitoba.ca/admin/governance/governing_documents/community/230.html More information and resources can be found by reviewing the Sexual Assault site <http://umanitoba.ca/student/sexual-assault/>

Intellectual Property - For information about rights and responsibilities regarding **Intellectual Property** view the policy:

http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-_2013_10_01.pdf