

## Geography 101A: Environment, society and sustainability

Spring 2016

*The basic science is not physics or mathematics but biology - the study of life. We must learn to think both logically and bio-logically—Edward Abbey (1929-1989)*

**Course Instructor:** Dr. Johan Feddema

Office: DTB B 203c Tel: 721-7325

**Office hours:** Wednesdays 1:00 – 4:00 or by appointment (contact [feddema@uvic.ca](mailto:feddema@uvic.ca) to make one)

**Lectures:** Tuesdays, Wednesdays and Fridays, 9:30 am – 10:20 am, Cornett Building, Room A121

**Labs:** **Attendance of labs is required to pass this course**, so when it is at all possible to make up a missed lab, you must do so, or find a mutually satisfactory alternative allowed by your TA.

Time	Location	Instructor	Instructor email
M 10:00 - 11:50	DTB B307	Menu, Kinga	<a href="mailto:kmenu@uvic.ca">kmenu@uvic.ca</a>
T 13:00 - 14:50	DTB B307	Behjat, Amir	<a href="mailto:ambehjat@uvic.ca">ambehjat@uvic.ca</a>
T 10:30 - 12:20	DTB B307	Menu, Kinga	<a href="mailto:kmenu@uvic.ca">kmenu@uvic.ca</a>
T 12:30 - 14:20	DTB B307	Behjat, Amir	<a href="mailto:ambehjat@uvic.ca">ambehjat@uvic.ca</a>

**If you miss a lab for any reason, or know you are going to miss a lab, please check with your TA and try to attend another section of that week's lab.** Your lab instructor will post office hours shortly after the beginning of term.

Senior Lab Instructor, Kinga Menu is also available to discuss general issues surrounding the course.

Office: DTB B304 Office phone: 721-7346 email: [kmenu@uvic.ca](mailto:kmenu@uvic.ca)

**Website:** Lecture and lab materials and notices are found on the Geography 101A Course Spaces site. Please check regularly for updates.

**Readings:** Dearden, P., and Mitchell, B. (2012). *Environmental change and challenge: A Canadian perspective*. 4th Edition. Toronto: Oxford University Press. Only use the 4th edition.

**Course:** The course includes 3, 50 minute, lectures per week and weekly 2-hour laboratory sessions.

**Structure:** The laboratory sessions will include field work, discussions, projects and debates. These laboratory sessions form an integral part of the course since they enable a more detailed discussion of topics relevant to the course and are intended to complement, not repeat the course. Furthermore, they are intended to counter the anonymity often experienced in the large lecture section.

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members. To promote this we encourage you to actively participate in class with appropriate questions and to contact us if you identify any issues in this class. To promote a healthy learning environment, students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Resource Centre for Students with a Disability (RCSA) as soon as possible. The RCSA staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://rcsd.uvic.ca/>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

**Course overview:** Nature is our oldest home and our newest challenge. Understanding how our global environment functions and how humanity has interacted with the natural world—both past and present—have emerged as subjects of major public concern in recent years. The realization that humans are causing radical changes to the environment—to the point that we are causing the climate of the entire earth to become warmer—is one major source of societal concern. The goal of Geography 101A is to introduce students to the way in which the ecosphere functions and providing insight to ways in which humans interact with the natural environment. In order to put our discussion into current context, climate change will be a recurring theme throughout the course as a foundation for understanding anthropogenic change on a global scale.

To understand the dimensions of various environmental problems, such as acid rain, climate change, eutrophication, species extinction, deforestation, and a host of others, students must have some idea of how the biosphere functions. The first part of the course focuses on this aspect, involving understanding the ways in which energy flows and materials cycle through the biosphere, and the structure and organization of ecological communities. From this base, students will more readily appreciate the ways in which these naturally occurring processes are changed by human activities such as forestry, agriculture, fisheries, and water management. The goal of the course is to provide students with the basic background and tools to analyze a wide variety of environmental issues and to better evaluate more sustainable approaches to societal interactions with the environment.

The course is designed to meet the requirements of three groups of students: 1. those who wish to take basic courses in geography to supplement their major in another field; 2. those who wish to do a BA/BSc Major/Minor in geography, 101A being a prerequisite for some higher geography courses; and 3. Environmental Studies students wishing an introduction to the functioning of environmental systems and human interaction with these systems.

Geog 101A as well as 101B, 103 are designed for BSc/BA Major/Minor geography programmes. Students wishing to know more about the Geography Department should review the Geography homepage and contact Kinga Menu (DTB B304) or Phil Wakefield (DTB B302), Senior Lab Instructors. GEOPLAN is a useful complement for planning your Geography program – find it linked on our UVic Geography homepage. Any students interested in joining the Geography Co-op Program should contact the Social Sciences Co-op in DTB A204.

**Course Instructor:** Johannes Feddema was born in the Netherlands, where his parents had a large animal veterinary practice. At age 11 they moved to Kenya, and then later to Rwanda, Switzerland, Pakistan and Tunisia. Experiencing numerous challenges facing these very different societies gave him an appreciation for how dependent human systems are on environmental resources and difficulties associated with conserving natural ecosystems. He obtained degrees in Biology, Geography and Climatology at the University of Delaware and has taught at UCLA and the University of Kansas. His research focus has been on understanding how humans alter climate by a variety of means. Specific topics have included simulating of land cover change impacts on climate, understanding how climate influences vegetation dynamics and animal migration patterns, and simulating urban systems in a global climate model to better understand how urban dwellers might be affected by climate change. He has published numerous articles on these topics and he has been a contributing author on several IPCC reports on climate change.

**Course Evaluation:** Evaluation of students is based on the combined scores from the course examinations and the laboratory sections of the course and student attendance in both the course and the laboratory portion of the course. Examination material will be heavily weighted to lecture and laboratory content and from related text book content. Because poor attendance is highly correlated with poor/failing grades and failure to eventually complete your degree, attendance is required for all parts of the course. Homework will be assigned through the laboratory section of the course.

Break down of overall course assessment:

Course Component	Percent allocation
Midterm	17.5%
Final	27.5%
Lecture attendance and participation	10%
Laboratory section grade	45%

- *Note: there will be a separate syllabus laying out the breakdown of the laboratory grades*

**Laboratory Work:** Assignments are due at the beginning of the lab. Late assignments will be deducted 10% per day. Exceptions to the late policy will only be granted by your lab instructor for verified illnesses (i.e., doctor's note needed). All assignments must be submitted to get a passing grade in the laboratory component.

As with any course which includes laboratory work, students will be required to make satisfactory standing in both parts of this course. Results in laboratory work will be announced by the department concerned prior to the final examinations, and students who have not obtained a grade of at least D in their laboratory work will NOT be permitted to write the examination, nor receive credit for the course.

If you must miss a lab you are required to either make it up by attending another lab section (with both TA's permission) or by doing a relevant replacement assignment as to be decided between you and your TA with the professor being the overriding decision maker.

Final letter grades will be assigned based on standard UVic grading policies where:

A+	A	A-	B+	B	B-	C+	C	D	F
90-100%	85-89%	80-84%	77-79%	73-76%	70-72%	65-69%	60-64%	50-59%	0-49%

Further details are at: <http://web.uvic.ca/calendar2015-09/FACS/UnIn/UARe/Grad.html>

**Course Experience Survey (CES):** My philosophy is that you are never too old to learn, and therefore I value your feedback on this course. What did you like, what did you not like as much? Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

**Course Outline:** *This is a tentative outline and is subject to change.*

<b>Date</b>	<b>Lecture topics</b>	<b>Readings - readings will be added as needed</b>
January 5-8	Intro, Concepts of sustainability and environmental systems	Chapter 1, 5
January 11-15	Energy in the Environment Global climate	Chapter 2
January 18-22	Water Resources Biogeochemical cycles	Chapter 4 & 11
January 25-29	Introduction to Ecology Energy in ecosystems	Chapter 3 & 4
February 1-5	Biomes I People-biomes interactions	Chapter 4, 9 & 10
<b>February 8-12</b>	<b>READING BREAK</b>	
February 15-19	Biomes II People-biomes interactions	Chapter 4 &, 8
February 22-23	Concept of the Anthropocene	<i>Crutzen, P. J., E. F. Stoermer (2000). The 'Anthropocene'. Global Change Newsletter 41: 17-18</i>
<b>February 26</b>	<b>Mid-Term Exam</b>	
Feb 29 - March 4	Early human impacts Agriculture revolution	Chapter 10
March 7 - 11	Air Quality - The atmosphere as an example of impact scale	Chapter 7
March 14 - 18	Biodiversity Extinction and protected areas	Chapter 14
March 21 - 23	Human resource needs Managing natural resources	Chapter 5, 6 & 12
<b>March 25</b>	<b>Good Friday - Holiday</b>	
March 29 – April 1	Where do we go from here? Back to the Future!	Chapters 13 & 15
<b>TBD</b>	<b>Final Exam</b>	