APPLIED SCIENCE & MANAGEMENT DIVISION
ENVS 100
School of Science
Fall, 2018

COURSE OUTLINE

ENVS 100

AN INTRODUCTION TO ENVIRONMENTAL SCIENCE I

45 HOURS
3 CREDITS

PREPARED BY: _____ DATE: _____
Scott Gilbert, Instructor
APPROVED BY: _____ DATE: _____
Margaret Dumkee, Dean

APPROVED BY ACADEMIC COUNCIL: _____

RENEWED BY ACADEMIC COUNCIL: _____

The Course Outline Template is approved by the Academic Council on June 20, 2018

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AN INTRODUCTION TO ENVIRONMENTAL SCIENCE I

INSTRUCTOR: Scott Gilbert, B.Sc., Ph.D.
Piwowar, BA

OFFICE LOCATION: A2515

E-MAIL: sgilbert@yukoncollege.yk.ca
kpiwowar@northwestel.net

TELEPHONE: (867) 668-8776

OFFICE HOURS: Tues /Thurs Kathy 11:00- noon or by appointment

CLASSROOM: Lecture - A2103
Lab - A2803 (Chem lab)

TIME: Lecture: Tues & Thurs, 1:00 – 2:30
Lab: Monday, 1-4pm

DATES: Sept 6 - Dec 20, 2018

COURSE DESCRIPTION

Environmental Science 100 is specifically designed for students who are not pursuing a science program but who wish to learn more about the physical and biological processes that shape our environment. Our planet, and its living and non-living parts, makes up the biosphere, which itself is a complex web of interactions. We investigate these interrelationships by studying the underlying processes in terms of their biology and chemistry.

The course has two goals. First to explain some of the basic concepts in ecology and chemistry and secondly to show how these concepts can help understand four or five of the critical problems facing our world: the size and growth rate of the world's population, atmospheric problems (green house effect, thinning of the ozone layer and acid precipitation) and sustainability of the world's agricultural and forestry industry.

PREREQUISITES

Admission to the School of Liberal Arts or School of Science.

EQUIVALENCY/TRANSFERABILITY:

UBC	Geog (3)	**SFU**	BISC 1xx (3)
UAF	Nsci Elec (n) (3)	**UAS**	Physical Geog Elec (3)
UR	Geog 100L (3) or Esci 200L (Educ. Students)		
UNBC	Envs 1xx (3) or with ENVS 101 = Envs 100 (3) & Envs 1xx (3)		
UVIC	Es 100L (1.5)		

See the website http://bctransferguide.ca/ for a more complete list of transfers within BC.

LEARNING OUTCOMES
Students that successfully complete this course will:

- Understand the basic processes and interrelationships that govern our biosphere.
- Be able to research environmental topics and prepare verbal and written arguments.
- Understand the range of environmental problems confronting the world, and be aware of potential solutions at a variety of levels (as individuals, locally and globally.)

DELIVERY METHODS/FORMAT
Two members of the School of Science will teach the course using a team teaching approach and several steps have been taken to ensure that this multidisciplinary approach is well integrated. Lectures are classroom based and lab period activities vary from chemistry lab experiments to field biology exercises to workshops and tutorials.

COURSE FORMAT
Lectures: Three hours per week (2 classes of 1.5 hours)
Labs: Three hours per week - a total of seven or eight three-hour activities during the term.

COURSE REQUIREMENTS

ASSESSMENTS

Attendance
Students are expected to attend both lectures and the scheduled activities (including field trips). Several of the lab exercises involve collecting data or making observations and this would make it difficult or impossible for students who miss the lab to complete the lab assignment. There is a strong correlation between regular attendance and academic performance.

ASSIGNMENTS & TESTS
There will be several short class quizzes and take home assignments and some field/lab activities may require written assignments. Rather than a single mid-term examination we will have two somewhat shorter quizzes. Students must pass the field/lab portion of the course if they wish to receive a passing grade for the overall course. The final exam will be scheduled sometime in December and will be comprehensive and cover all topics taken up during the term.

Book review	10
Class participation/assignments	5
Field/lab activities	25
Quiz (2 @ 15%)	30
Final examination	30
Total	**100**

REQUIRED TEXTBOOKS/MATERIALS

No text is required. Readings for each lecture will be made available as colour pdf files on the course web site. A course manual will be distributed during the first lecture.

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC) at (867) 456-8629 or lac@yukoncollege.yk.ca.

Syllabus

There is no required text for our course. Instead I have assembled a series of selected readings, listed below, and made them available on the course website as colour pdf files. A detailed lecture scheduled will be handed out in the first class along with your lab manual.

	Lecture topic	**Reading:**	**# pages**
1	Introduction	Withgott, J., Laposata, M. and Murch, B. 2017. Chapter 1 *IN: Environment: The Science Behind the Stories*, 3rd Canadian Ed. pp. 2-24.	22 pp
2	Succession	Dearden, P. & Mitchell, B. 2009. Chapter 3 *IN Environmental Change and Challenge.* 3rd Edition pp. 83-94	12 pp
3	Scientific method	Botkin, D.B., Keller,E.A. & Heathcote, I.W. 2006. Chapter 2 *IN Environmental Science: Earth as a Living Planet.* Canadian Edition pp. 18-37	20 pp
4	Intro to ecology & energy flow in ecosystems	Miller, G.T. and Hackett, D. 2011 Chapter 4 *IN* Living in the Environment, 2nd Canadian Edition, pp 55-85	31 pp
5	Ecology - limits to distributions	Krebs, C. 2010. Chapter 2, Geographic Ecology *IN: The Ecological World View*. pp 21-40.	20 pp
6	Human populations	Berg, L.R., Hager, M.C., Goodman, L.G. & Baydack, R.K. 2011. Chapter 3 *IN Visualizing the Environment,* Canadian Edition. pp 66 - 99	34 pp
8	Atmosphere & Climate	Draper, D. & Zimmerman, A. 2017. Chapter 12 *IN Our Environment: A Canadian Perspective.* 5th Edition pp. 421-465	46 pp
7	Air Pollution	Cunningham, W.P., Cunningham, M.A., Saigo, B.W., Bailey, R. & Shrubsole, D. 2005. Chapter 9 *IN Environmental Science: A Global Concern.* Canadian Edition. pp. 173-196	24 pp
9	Agriculture	Miller, G.T. and Spoolman, S.E. 2016, Chapter 10, *IN Environmental Science*, 15th Edition. pp 217-247	31 pp
10	Forestry	Freedman, B. 2010. Chapter 23 *IN Environmental Science: A Canadian Perspective* 5th Edition. pp. 387-407	22 pp

11	Pesticides	Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012 – Chapter 22 *IN Environment*. 8th Edition. pp. 462-479	19 pp
12	Northern contaminants	Indigenous and Northern Affairs Canada. 2017. Canadian Arctic Contaminants Assessment Report 2017. *Contaminants in Canada's North: State of Knowledge and Regional Highlights* 52 pp	52 pp