GEOG 1290 A01 INTRODUCTION TO PHYSICAL GEOGRAPHY

COURSE OUTLINE: FALL 2015

DESCRIPTION

Studies in PHYSICAL GEOGRAPHY are focused upon the thin surface layer of the earth where land, air, and water meet. The topics included in this introductory course appear as parts of many disciplines such as: Geology, Meteorology, Climatology, Biology, Pedology, and Oceanography; but the basic concern of those who study Physical Geography is to investigate the ways in which phenomena associated with these various disciplines interact with one another. Humans are becoming increasingly aware of the significance of changes that occur in the physical environment. We are at last beginning to realize that we too have an impact upon the environment, and that the consequences of our actions may have a positive or a negative effect.

My goal for this course is to make sure every student receives an excellent final grade and each student live up to their full potential.

COURSE OBJECTIVES

- Understand the main spheres or realms of the Earth system including the atmosphere, lithosphere, hydrosphere and biosphere
- Describe the global energy budget and the meteorological/climatological variables of the Earth's atmosphere
- Examine the volcanic/tectonic and external forces that create the physical features on the Earth's surface
- Explain the role water plays in the various Earth processes
- Discuss the spatial distribution of plants and animals on the Earth's surface and the factors/processes that control this distribution
- Develop an understanding of the complex relationships among the basic elements of our physical environment
- Gain an awareness of the increasing impact of our activities upon the ever-changing Earth

GENERAL INFORMATION

Dr. John Iacozza
Office: 472 Wallace Building
Phone: (204) 474-8483
Email: John.Iacozza@umanitoba.ca
Office hours: Monday and Wednesday 9:30-10:30 am.
Course website: umlearn.ca

TEXTBOOK

Required: deBlij, H.J et al. 2010. *Physical Geography: The Global Environment* - Canadian Version (2nd edition). New York: Oxford University Press.

Student Resources: User ID: deblij_pg; Password: Wes3E
http://www.oupcanada.com/higher_education/companion/geography/9780195428971.html

EVALUATION

Term Tests (x2): 50% (25% each test) Final Exam: 50%

FINAL GRADE ALLOCATION

A+	90% or above	C+	65% - 69%
A	80% - 89%	C	60% - 64%
B+	75% - 79%	D	50% - 59%
B	70% - 74%	F	49% or below

STUDENT RESPONSIBILITIES

- A high level of student cooperation and participation, involving asking and answering questions during the lectures.
- ***Cell phones and portable music players must be turned off during lectures. Students are also required to remove earphones. NO TEXTING DURING CLASS.***
- Students are required to attend all lectures and take notes. Students are expected to be punctual for classes. Not all material presented in the lectures is covered in the text. *If you miss a lecture, make arrangements to get notes from a fellow student, not from instructor!* Lecture slides will not be provided on UMLearn (the learning management tool).
- The individual student is required to read the assigned chapters of the textbook *prior to class*. Not all the textbook will be covered in the lectures but may be covered on the quiz or exam.

COURSE POLICIES

Academic Integrity: Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of Manitoba.

Plagiarism is copying another student's work, including their answers for any questions on the term tests.

Cheating is the possession of an unauthorized material during the final exam, including crib notes, texts or dictionaries. Students must not be in possession of a cell phone, iPod, iPad or any other electronic device.

Commonly, the penalty for any form of academic dishonesty is a grade of zero on the term test or final exam, or a final grade of F in the course. Please familiarize yourself with the University policy on academic dishonesty found on the following website: http://www.umanitoba.ca/student/resource/student_advocacy/cheating_plagiarism_fraud.html.

Audio/Video Recording: Students are NOT permitted to photograph, audio or video record the lectures in its entirety or any parts.

Questions/Concerns: If you are having a problem and want to discuss something, please feel free to see me before/after class, during my office hours or make an appointment at a more convenient time. I can be reached through phone or email (preferred method).

Emails: Ensure that the course name and number are included in the subject line for all emails. Please make sure emails are written in a professional manner, including complete sentences and do not use text language (I am not fluent in shorthand). Please address the email to John or Dr. Iacozza (not Buddy or any similar terms). Emails must be sent from University of Manitoba email accounts; emails from other accounts (such as gmail) will not be responded to. Emails will typically be responded to during regular office hours. You should not expect a response on weekends or in the evenings (i.e. after 4 pm).

VOLUNTARY WITHDRAWAL DATE

The voluntary withdrawal date is the last date for withdrawing from this course without academic penalty. The voluntary withdrawal date for this course is November 18, 2015. Evaluative feedback will be provided prior to this date.

TESTING

The tests and final exam will consist of multiple choice and short answer questions. These questions will be based on lectures, assigned readings and class discussion. No extraneous devices (i.e. dictionaries, cell phones, notes, textbooks, etc.) will be allowed for the tests or final exam. You will need to bring a writing utensil (i.e. pencil/pen) and a form of identification (Student ID card preferred). The term tests will be written during class time and the final exam in December during the exam period. The tests will not be cumulative, but the final exam will be based on the entire course material. (The final exam is broken down based on: 25% of the exam will be based on material from the first test, 25% from the second test material, and 50% from material not covered on either test).

The student is responsible for providing written proof of either illness or compassionate distress in order to be allowed to write a make up test. Please let me know of your situation promptly and present written proof within five (5) working days. Please see list below for acceptable and unacceptable reasons for rewriting the term tests.

Reasons for granting an extension (term test): a death in your immediate family, an illness in either yourself or in a dependent (requires written note from a doctor dated BEFORE the assignment is due), and required to travel for work. The Instructor will not accept a note dated **AFTER** the due date.

Reasons for not granting an extension: having another assignment due at a similar time/day, being away from the university for a personal reason (i.e. holiday or personal vacation), being too busy with other course work (i.e. having a midterm that same day or week), not attending the lectures due to personal or compassionate reasons (or other reasons), car broke down and could not submit assignment on time, computer is not working properly and you lost the assignment, or any other reason deemed inappropriate by the instructor. This is not an exhaustive list. Please don't ask for an extension if any of these or similar reasons apply. If you know that you will be away, you MUST submit the assignment before the due date.

If you miss the final exam due to illness or compassionate reasons, you **must** make arrangements with your own Faculty office.

SPECIAL NEEDS

Students with disability-related needs or are experiencing difficulty should discuss issues with a councillor in one of the following Student Affairs offices as soon as possible. You can also discuss any issues with your instructor, who can direct you to appropriate institutional resources.

- Student Accessibility Services: 155 University Center, 204-474-6213, 204-474-9790 (TTY)
- Learning Assistance Center: 201 Tier Building, 204-480-1481
- Student Counselling and Career Centre: 474 University Center, 204-474-8592

TENTATIVE DATES (please note that the dates may change):

TESTS	*DATE*
Term Test #1 (introduction to atmospheric moisture)	October 15, 2015
Term Test #2 (weather to	November 10, 2015
Final Exam	Scheduled through SRO

COURSE OUTLINE:

LECTURE TOPIC			*READINGS*
INTRODUCTION	Introduction	Geography and Physical Geography	pp. 6-13; 18-19; 29-31
		Spheres of Earth system	
		System, feedback and models	
		Latitude and longitude	
	Earth In Space	Revolution, rotation and axial tilt	pp. 53-62
		Circle of illumination and insolation	
		Seasons	
ATMOSPHERE	Introduction to the Atmosphere	Weather vs. climate Atmospheric composition	pp. 65-84
		Structure of the atmosphere	
	Radiation and Energy Balance	Radiation balance	
		Energy transfer mechanisms	
		Surface energy balance	
		Greenhouse effect	
	Temperature	Cycles in temperature	pp. 88-97
		Factors that influence temperature	
		Temperature inversions	
		Global temperature variations	
	Air Pressure and Winds	Wind and pressure definition	pp. 100-109
		Pressure and altitude	
		Air movement in atmosphere	
		Geostrophic and frictional surface winds	
		Local wind systems	
		Cyclones and anticyclones	
	Circulation Patterns	Surface circulation	pp. 113-121
		Upper atmosphere circulation	
	Atmosphere Moisture	Humidity and Types	pp. 138-141; 146-148; 155-166
		Stability and adiabatic processes	
		Clouds and fog	
		Precipitation types and formation	
		Thunderstorms	
		Orographic precipitation	
		Frontal precipitation	
		Airmass	

LECTURE TOPIC			*READINGS*
ATMOSPHERE (CON'T)	Weather Systems	Low-latitude systems	pp. 169-175
		Mid- and high-latitude systems	
	Severe Weather Systems	Winter season	pp. 179-192
		Summer season	
	Climate Classification	Temperature and precipitation patterns	pp. 210-217
		Koppen Classification system	
	Climate Change: Past and Current	Evidence of climate change	pp. 248-259
		Climate history of the Earth	
		Mechanisms of climate change	
		Climate future	

LITHOSPHERE	Introduction to Lithosphere	Internal layers of the Earth	pp. 281-292
		Outer layer of the Earth	
		Lithosphere and crustal surface	
		Ocean floor	
		Rocks	
	Lithospheric Plates	Continental drift	pp. 326-334
		Distribution of plates	
		Movement of plates	
	Volcanism	Distribution of activity	pp. 345-355
		Types of volcanoes and landforms	
	Tectonics	Earthquakes and distribution	pp. 362-367; 376-383
		Fault structures	
		Fold structures	
	Weathering and Erosion	Denudation	pp. 390-393; 399-406
		Chemical and physical weathering	
	Slope Processes	Introduction	pp. 415-427
		Slope movement	
		Mass movement processes	
		Hill slope processes	
	Fluvial Processes	Water flow in streams	pp. 433-438; 447-458; 469-470; 477-486
		Streams and basin	
		Streams as a system	
		Stream function	
		Factors in stream erosion	
		Types of streams	
		Drainage patterns	
		Landforms	

LECTURE TOPIC			*READINGS*
LITHOSPHERE (CON'T)	Glacial Processes	Introduction	pp. 503-513; 522-527; 532-537; 544-549
		Glaciers of the past	
		Formation of glaciers	
		Glacier movement and mass balance	
		Continental ice sheet landforms	
		Alpine glacier landforms	
	Periglacial Processes	Introduction	pp. 555-565
		Permafrost	
		Geomorphological processes	
		landforms	
BIOSPHERE	Introduction to Biogeography	Introduction	pp. 620-623; 672-689
		Dynamics of biosphere	
		Biogeochemical cycles	
		Plant succession	
		Geographical dispersion	
	Phytogeography	Biomes	pp. 693-703
		Terrestrial biomes	
	Zoogeography	Process of evolution	pp. 706-713
		Zoogeographical realms	
		Island zoogeography	
	Pedologoy	Formation of soil	pp. 603-649
		Processes in soil	
		Soil profiles	
		Soil regimes	
		Soil characteristics	
HYDROSPHERE	Introduction to Hydrosphere	Introduction	pp. 141-145; 432-433; 438-441
		Evaporation	
		Surface water balance	
		Water at the surface	
		Water beneath the surface	
GEOMATICS	Introduction to Geomatics	Maps and cartography	
		Geographic information system	
		Remote sensing	