

## **Geography 205: Geography of Weather and Climate Change**

### **Introduction:**

Welcome to Geography 205! This is a five-credit course that fulfills a natural science requirement for the Associate in Arts and Sciences (AAS) Degree at Bellevue Community College. There are no prerequisites for this class.

### **Course Description:**

The course will investigate the dynamic patterns and processes of weather, climate and climate change and the inherent interactions of these systems with humankind. I hope that the course material will create a desire to understand the intricacies of these systems and inspire a deeper appreciation of these components of Geographic enquiry. For intimacy with a landscape inspires respect for that landscape, in all its splendor and in all its shortcomings.

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**Course Objectives:**

Basically I hope that this class will allow you to not only better understand the basics of weather and climate - but to use these basics as building blocks to better understand the hugely important issue of global warming and climate change. The class will start with weather and climate basics and move on toward global warming and climate change - with all of the discussion forums providing a suite of topics that focus on various aspects of climate change.

This class should enable the successful student to secure:- a knowledge of solar energy, the Earth's

rotation and orbit, and seasonality: a knowledge of the composition of the lower atmosphere, the radiation balance, and temperature concepts and controls: an understanding of atmospheric and oceanic circulation: an awareness and appreciation of weather phenomena at both micro and macro levels of inquiry: an understanding of the interpretation and analysis of weather maps: an awareness of the inherently unique nature of weather and weather patterns: an appreciation of climatic classification and global climate types: a recognition of the significance of the role of climate in the framing of cultural attributes: an understanding of global climate change and the implication of such oscillations on world ecosystems: an appreciation of the role of weather and climate on the characteristics and distribution patterns of soils and vegetation: a knowledge of map analysis and interpretation as well as the use of graphs and diagrams and the ability to abstract relevant details from secondary sources of information: and a recognition of the beauty in nature and a desire to secure a greater intimacy with the natural landscape.

**Format:**

The course is subdivided into Five Modules. It is advisable to make notes on key issues in the Class Notes, Textbook Readings and Essential Readings - as you will be tested on this material in the Module Exams and in the Final Exam.

Each module begins with Class Notes. These notes will present an overview of the various topics covered in that module. The information in the class notes focuses on material that may not be especially thoroughly covered in the textbook. You should begin each module by reading these introductory Class Notes – some questions in the module exam and in the final will be taken from this section. The next step is to read through the Directions for Textbook Readings. This information will direct you to the reading in your textbook, and while each chapter(s) identified should be carefully read there are specific areas for you to study that are very important and outlined in these directions.

Every module also has an Exercise Section. This is very important and your next step. Read through this section and answer all of the questions in each of the exercises as these form the basis of most of the questions in the module exam and you will be tested on this material in the module exams and in the final.

The final step in each module is the Module Exam. Having completed all of the above steps you will be ready to take the module exam. To prepare for this exam it is vital that you complete all of the questions in the various exercises in the exercise section of the module. Before you attempt the exam carefully read through the Class Notes again (and any of your personal notes that you may have taken from the class notes) and go over your answers to the questions asked in the Exercise Section. Remember that the module exams are all multiple choice open book exams and so have all of the material at hand when you take these exams. You have a limited time period of 60 minutes for the module exams, but, this should be enough time for you if you have the answers all done and know the material from the module well enough (you can always look up an answer if you cannot fully remember it, but, have a good idea of generally where to look).

Remember - all of the questions in the Module Exam will be taken directly from the Class Notes and

from the exercises in the Exercise Section in the module. You will only have one chance to do each of the module exams – and once you start you must continue and you will be limited to 60 minutes. Also remember to Save all your answers before you submit your exam for marking.

There are in all 5 Module Exams – all multiple-choice – and all answered online. The Module Exams will be open for most of the quarter - and in this sense this class is mostly a self-paced class - but please be sure to do them by the closing date - please check the Course Calendar for exact dates – because you have so much time to do each exam there are no make-up opportunities.

There are also a series of 5 Class Discussions that will all be related to aspects of global warming and climate change. Each Module Discussion Topic is posted and viewed by clicking on the link in that Module and if you contribute to the discussion you will secure a maximum of 25 marks per module discussion toward a total of 125 marks added to your overall score. To secure these marks your first post should discuss the topic under review and should be of approximately 250-300 words and then a least one response post in which you reflect on other comments by other students - that should be of about 50-100 words.

It is recommended to answer the modules in the sequence from 1 through 5.

Module 1: The Atmosphere, Energy and Temperature.

Module 2: Atmospheric and Oceanic Circulation.

Module 3: Water, Weather and Climate Systems.

Module 4: Global Climate Systems and Ecosystems.

Module 5: Global Climate Change.

The Final Examination:

This will be a 90 minute online Final Exam. You will be required to take the final exam within the last few days of the course. Please note that most of the questions are based on material covered from the exercises in the modules. There will be over 50 multiple choice questions worth 2 or 3 marks each (note that this gives a total of 120 marks – so you have 20 marks of extra credit in the Final).

**Required Texts:**

‘Elemental Geosystems’: any edition from the 5th edition will work: by Robert W. Christopherson.

Published by: Prentice Hall You should also have access to an Atlas of your choice.

**Participation: you are responsible for:**

1. the technical aspects of your computer/email/printer etc. Please look at the BCC Distance Education website for the WebCT Tutorial and for hardware requirements.

2. reading the appropriate material as specified.
3. taking part in email discussions/please do not use voice email when contacting me.
4. keeping comprehensive personal notes/journals/diagrams/maps relevant to material studied.
5. timely completion of module exams and the final examination/please note that there are no make-ups available - you should not leave exams to the last minute in case you have a technical problem - this is a very important consideration/you should have a back-up plan should your system 'crash' at the wrong time.
6. please review the Bellevue College academic calendar for all details regarding registration and withdrawal policy and procedures and distribution of final grades/you should be familiar with the Social Science Division policy for cheating and plagiarism/and if you require special student services.
7. please remember there are no make-up opportunities for examinations: it is important to make a commitment to this online class in just the same way as you would a classroom based class.

#### **Grading: mark allocation:**

5 Module exams - each is worth 50 marks = **250 marks**

Final Exam – worth **100 marks (it carries 120 marks - so 20 marks of extra credit)**

5 Module Discussion Topics - posted and viewed by clicking on the link in that Module and if you contribute to the discussion you will secure a maximum of 25 marks per module discussion toward a total of **125 marks** added to your overall score. To secure these marks your first post should discuss the topic under review and should be of approximately 250-300 words and your response post in which you reflect on other comments by other students should be of about 75-100 words. These 5 discussions are based on watching a series of video productions and are intended to focus on aspects of global warming and climate change - and by the time you have completed these you should have an in-depth appreciation of this issue of global importance.

Class evaluation is worth **15 marks** of extra credit - it will be available toward the end of the quarter for you to complete.

#### **The Grading Scale:**

The total mark allocation for the course is 475 marks (also 35 marks of potential extra credit).

Grading

- A 430 plus
- A- 405-429
- B+ 380-404
- B 355-379
- B- 330-354
- C+ 305-329
- C 280-304
- C- 255-279
- D+ 230-254
- D 205-229
- F 204 and less

Good luck and I sincerely hope that you enjoy the class!

## **PROCEDURES AND GUIDELINES OF THE SOCIAL SCIENCE DIVISION**

**(Updated SP 2014)**

### Cheating, Stealing and Plagiarizing\*

Cheating, stealing and plagiarizing (using the ideas or words of another as one's own without crediting the source) and inappropriate/disruptive classroom behavior are violations of the Student Code of Conduct at Bellevue College. Examples of unacceptable behavior include, but are not limited to: talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones/pagers to ring, and inappropriate behavior toward the instructor or classmates. The instructor can refer any violation of the Student Code of Conduct to the Dean of Student Services for possible probation or suspension from Bellevue College. Specific student rights, responsibilities and appeal procedures are listed in the Student Code of Conduct, available in the office of the Dean of Student Services.

### Incomplete

If a student fails to complete all the required work for a course, an instructor may assign the grade of Incomplete ("I"). The student must complete the coursework by the end of the next quarter, or receive the assigned letter grade (usually an "F").

### F Grade

Students who fail a course will receive a letter grade of "F."

### Final Examination Schedule

The Social Science Division will adhere to the final examination schedule as stated in the BC Schedule. Final examinations will be held at the end of each quarter at fixed times. Instructors will not give examinations in advance of the regular schedule. A student who is absent from any examination held at any time during the quarter may forfeit the right to make up the examination. If, for illness or some other circumstance beyond the student's control, the student is unable to be present at any scheduled examination and has contacted the instructor on a timely basis, the student may be permitted to take such examination at a time designated by the instructor.

### Withdrawal From Class

College policy states that students must formally withdraw from a class by the end of the seventh week of the quarter (Registration Office, B125). If a student has not withdrawn by that date, an appropriate letter grade will be assigned for the course.

### Hardship Withdrawal

Instructors may assign the grade of "HW" (hardship withdrawal) at their discretion in the event that a student cannot complete the coursework due to extreme and exceptional circumstances. Students may also contact the Enrollment Services office BEFORE grades are assigned in cases of hardship.

### Students Who Require Disability Accommodations:

Students with disabilities who have accommodation needs are encouraged to meet with the Disability Resource Centre (DRC) office located in B132 (telephone 425.564.2498 or TTY 425.564.4110), to establish their eligibility for accommodation. The DRC office will provide each eligible student with an accommodation letter. Students who require accommodation in class should review the DRC accommodation letter with each instructor during the first week of the quarter.

Students with mobility challenges who may need assistance in case of an emergency situation or evacuation should register with Disability Resource Centre, and review those needs with the instructor as well.

### Distribution of Grades

Grades will not be posted in the Social Science Division or in faculty offices, and secretaries will not give out grades. Students should access their grades through the BC Web site.



### Return of Papers and Tests

Paper and/or Scantron score sheet returns will be arranged in the following ways ONLY: by mail, if student supplies the instructor with stamped, self-addressed envelope (with appropriate postage); or by the instructor designating a time and place whereby the student may retrieve his/her papers. Unclaimed papers and/or Scantron score sheets must be kept by the instructor for a minimum of sixty (60) instructional days following the end of the quarter.

*\*If you are accused of cheating, stealing exams and/or plagiarism, there is a Bellevue College Student Discipline*