NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Blackboard site for enrolled students and may be more current than this sample syllabus.

OSU Extended Campus – Syllabus
GEO 308 GLOBAL CHANGE AND EARTH SCIENCES (3 CREDITS)

****Carefully read the entire syllabus. Save the syllabus for reference during the term.****

Instructor: Dr. Kaplan Yalcin
Office: 250 Wilkinson Hall, Corvallis campus
Phone: 541-737-1230
Fax: 541-737-1200
E-mail: yalcink@geo.oregonstate.edu (this is the BEST way to contact me)

Course Catalog Description: Study of global change over different timescales during the history of the Earth, with emphasis on the evolution of its atmosphere and biosphere, mass extinctions, plate tectonics, climate and climate change, and human activities.

Prerequisites: There are no prerequisites for this course.

Baccalaureate Core: Successful completion of this course fulfills OSU’s Baccalaureate Core course requirements in the Synthesis category under Contemporary Global Issues.

This course combines approximately 90 hours of instruction, online activities, and assignments for 3 credits

Course Rationale: Global change has been a central focus of scientific discussion and policy-making decisions over the last decade, and will be increasingly emphasized during the 21st century. Perhaps the most significant issue in global change research is the recognition that humans now play an active role in shaping and changing the Earth’s environment. The Intergovernmental Panel on Climate Change (IPCC), representing the scientific analyses by over 2000 scientists, has identified human-produced greenhouse gases as a primary cause of the global warming that the world has experienced over the last 150 years, as observed in historical climate records. Global warming is not the only issue that is of concern. There are many other forms of global environmental change occurring today as a result of human activities, including air pollution, acid rain, and the stratospheric ozone hole.

However, global change is the rule rather than the exception in Earth history. Our planet has been in a continual state of change as natural processes that comprise the Earth system (biosphere, geosphere, cryosphere, hydrosphere, and atmosphere) interact with one another on many different timescales. Of the many forms of change that occur, one of the most visible in the geologic record, and of most concern for our future, is climate change. In order to evaluate the magnitude of the human contribution to today’s environmental changes, to make realistic and meaningful predictions of the future, and to direct any course of action that is taken, we need to appreciate and understand how complex and interactive climate processes have shaped the Earth’s environment during the past. The purpose of this course is to
understand how and why global change has occurred in the past, and thus provide context for today’s global changes due to fossil fuel use, deforestation, agriculture, and other human activities

Note: when sending an email, include a descriptive subject line with the course number (for example, GEO 308 Week 1 Quiz if you have a question about the first quiz). Use your OSU email account to send emails. These procedures will allow me to help you more quickly.


NOTE: For textbook accuracy, please always check the textbook list at the OSU Bookstore website. Sample syllabi may not have the most up-to-date information.

A note on the textbook: Because global change encompasses such a wide range of topics, the ideal textbook for a course in global change has not yet been written. The textbook selected for this course is intended as supplementary reference material only. You will not be tested on the material in the textbook; instead quiz and exam questions will be drawn exclusively from the material presented in the lectures. The textbook, can however, serve as an aid to understanding the lecture material.

Canvas: This course is entirely online and accessed by logging in to OSU’s Canvas system: http://oregonstate.instructure.com. All course materials (lectures, assignments, exams) are distributed online via Canvas. The course will only appear in Canvas to those who have registered for it. For technical assistance, call 1- 800-667-1465 or go to http://ecampus.oregonstate.edu/services/technical-help.htm.

Although every effort has been made to ensure that course materials are compatible with a variety of hardware and platforms, internet access and Canvas compatibility is the responsibility of the student. Extensions for missed deadlines due to personal computer or internet access issues will not be granted. If your computer or internet connection fails, simply go to a campus computer lab, local library, or other public place where internet is available to access the course in Canvas.

Required software: To view the course lectures, you will need Microsoft PowerPoint. Students will also need Word and Excel or access to a MS Office compatible word processing and spreadsheet programs. Alternatives to this are the free Microsoft PowerPoint Viewer for Windows and for MAC. Also available for free download is OpenOffice, a suite of productivity tools that reads and writes to Microsoft Office files and allows users to open and save Word, Excel, and PowerPoint files on their preferred platform. A current version of the free Adobe Reader will also be useful for opening supplemental readings and other documents posted on Canvas as PDF files.

Outline of Topics Covered:
Week 1: Introduction to Global Change
Week 2: The Plate Tectonic System
Week 3: Life and Its Effect on the Atmosphere
Week 4: Evolution and Extinction
Week 5: The Climate System; Midterm Exam
Week 6: Climate Change on Geologic Time Scales
Week 7: Pleistocene Ice Ages
Week 8: Recent Climate Change
Week 9: Humans and Climate Change
Week 10: Other Global Change Problems
Week 11: Final Exam
Learning Outcomes: Students taking GEO 308 will be expected to:

1. Describe the Earth as a system and explain the operation of its plate tectonic and climate systems.
2. Discuss the evolution of the Earth and its biosphere and assess the effect of biological evolution on the global environment.
3. Interpret the record of global change as a natural process responding to different forcings and operating on various timescales.
4. Evaluate the evidence for global warming in the context of past global changes.
5. Assess the impact of human activities on the global environment and evaluate strategies for minimizing these impacts.

As a baccalaureate core course in contemporary global issues students will be expected to:

1. **Analyze the origins, historical contexts, and implications of contemporary global issues.** This course covers global change on all time scales, from the formation of the Earth to the current global warming. Emphasis is placed on the methods used by scientists to document and quantify global change in the past and understand the processes responsible. We will then see how our understanding of past changes is used to identify the causes of current changes and make predictions of future change.

2. **Explain the complex nature and interdependence of contemporary global issues using a multi-disciplinary approach.** The study of global environmental and climate change is perhaps the most interdisciplinary of all fields of study encompassing concepts from natural (geology, physics, chemistry), applied (engineering, mathematics), and social (political, economic) science fields. Global change cuts across all types of boundaries, from ecological and geographic boundaries to political boundaries. Climate change, population growth, and energy availability are not contained by political borders. Regardless of culture or economic status, we share one world with one common future. In this course we will see how global change processes operating in one part of the world result in change in other parts of the world, and how the lifestyles we live and the decisions we make have global ramifications.

3. **Articulate in writing a critical perspective on contemporary global issues using evidence as support.** Throughout this class we will emphasize how scientists study global change by making observations, gathering evidence, and drawing conclusions. Students taking this course will develop informed positions on global change and related issues and convey those positions through effective writing in a short paper, on Canvas discussion boards, and in essay questions on exams by explaining the evidence that allows us to draw conclusions about how and why global change occurs. Students will acquire the knowledge base to evaluate the credibility of various arguments over global climate change, recognize assumptions, and keep uncertainties in their proper context.

Assessment Methods: Student proficiency in the above course and baccalaureate core learning outcomes is assessed on quizzes and exams, which always include an essay component, as well as in discussion board participation and assignments that emphasize technical writing, critical thinking, data analysis, and interpretation skills requiring students to draw conclusions based on empirical evidence.

Course Organization: Students in GEO 308 will work through 10 one-week lessons grouped into weekly modules in Canvas. Each week includes reading, taking notes, and answering review questions on three or four lectures (presented as PowerPoint with audio to facilitate students taking their own notes on the material) and assigned portions of the text and a Canvas quiz over that week’s material that includes both multiple choice and essay questions. There is no quiz in Week 5 due to the midterm. Students will also participate in five discussion boards, each open for two weeks. There are also three assignments that work with global change literature or data sets.

There is a midterm (end of Week 5) and cumulative final exam (during final exam week). Exams are proctored, timed and only available for a limited time through Canvas (see course schedule). **You must arrange for a proctor in order to take the mid-term and final exam.** Permission to take an exam
outside of the scheduled window must be arranged well in advance. Proctors are not needed for the weekly quizzes.

Each week will end on Sunday at 10 pm (Pacific Time). All assignments must be submitted through Canvas by 10 pm Pacific time on the Sunday ending the week they are assigned.

See the Course Schedule for each term posted in the Start Here module for all specific deadlines. All deadlines are exact and late work is not accepted. For discussion board participation, no points will be awarded if not completed within the weekly time window for completion; in other words it is not possible to “make-up” discussion board participation. For assignments, quizzes, and exams, permission for an extension must be arranged in advance (i.e., before the due date) with the instructor and will only be granted in cases where circumstances beyond the student’s control prevent timely completion of the assignment. Late work is not accepted under any other conditions.

Course Requirements and Grading: There are nine weekly quizzes (no quiz the week of the midterm), three assignments, five discussion board topics, a midterm exam, and a final exam. These are weighted according to the following table:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (nine @ 20 points each)</td>
<td>180</td>
</tr>
<tr>
<td>Assignments (three @ 30 points each)</td>
<td>90</td>
</tr>
<tr>
<td>Discussion Board (five @ 10 points each)</td>
<td>50</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150</td>
</tr>
<tr>
<td>Total Points</td>
<td>570</td>
</tr>
</tbody>
</table>

Course Grades: Final grades are based on your point total according to the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≥ 92%</td>
</tr>
<tr>
<td>A-</td>
<td>≥ 90%</td>
</tr>
<tr>
<td>B+</td>
<td>≥ 88%</td>
</tr>
<tr>
<td>B</td>
<td>≥ 82%</td>
</tr>
<tr>
<td>B-</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>C+</td>
<td>≥ 78%</td>
</tr>
<tr>
<td>C</td>
<td>≥ 72%</td>
</tr>
<tr>
<td>C-</td>
<td>≥ 70%</td>
</tr>
<tr>
<td>D+</td>
<td>≥ 68%</td>
</tr>
<tr>
<td>D</td>
<td>≥ 62%</td>
</tr>
<tr>
<td>D-</td>
<td>≥ 60%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60%</td>
</tr>
</tbody>
</table>

If at any time you are concerned about how you are doing in the class or have any questions about the course, the material or anything related to earth resources and the environment, contact me.

Incompletes: Final grades are based on the work completed at the end of term. Students should not expect an incomplete if the course is not completed by the end of the term except in extreme and unusual circumstances that are beyond the student’s control and even then only if the following two conditions are met: 1) the student has a passing grade at the time the request for an incomplete is made and 2) the student has completed at least 75% of the coursework.

You will need to put effort into this class to do well. This class is designed for people who want to learn, are willing to take responsibility for their learning, and understand how this course relates to their education, their degree program, and their personal goals. More information on what you need to do to complete each of the course requirements is found in the following sections.

Discussion Boards: Active participation in this course is an essential part of your grade, and is accomplished through the discussion board in Canvas. Discussion board participation is an opportunity for you to express ideas and information in a forum comparable to a classroom discussion. A discussion board question is posted every two weeks (Weeks 1, 3, 5, 7, 9). You have two weeks to post comments and respond to posted comments. You can earn up to 10 points per discussion board by posting an original contribution, asking insightful questions, or responding to your classmates ideas on the week’s topic.
The questions should be provocative enough that discussion occurs naturally, but in order to encourage participation every student will be required to (1) post an original response to the question by Sunday of the first week and (2) post at least two substantive responses to a classmate’s post by Sunday of the second week. Your grade for each discussion is based on the degree to which your posts contribute to the class discussion. Although the discussion board is informal, please use correct spelling, grammar, and punctuation so that everyone can understand your ideas. Remember to be respectful of the opinions and viewpoints of others.

**Quizzes:** Quizzes consist of ten multiple choice questions and two essay questions on the current week’s lectures. The quiz must be taken in Canvas by 10 pm Pacific Time on Sunday of that week and has a 35 minute time limit. Quizzes are open book/open note and are not proctored.

However, quizzes are not homework assignments. They are short exams. You are expected to have practiced answering questions about the material before you take the quiz. You are not allowed to use your notes, the textbook, or the canvas lectures during an exam, and exams are proctored to prevent students from doing so. As a result, you should take the quizzes the same way - otherwise your quiz scores would not reflect how you can expect to do on the exams. Think of the weekly quizzes as short exams for that week's material. Practice answering the review questions until you are confident in your ability to answer them without help from your notes, the textbook, or the canvas lectures. Only then are you ready to take a quiz.

You have 35 minutes to take a quiz. If you have any time remaining after answering all the questions, you may refer back to your notes if you were unsure about any particular question. Just remember that any quiz question that you find you need some help from your notes to answer is a question you were not prepared to answer, and would likely miss on an exam. If you find that the time limit for a quiz makes you feel rushed, make yourself better prepared for quizzes (see section on preparing for quizzes and exams) – with more preparation the time limit will become less and less of a factor. Extra time on quizzes can only be given to students with a documented need for extra time and must be arranged through the university’s DAS office – see [http://ds.oregonstate.edu/home/](http://ds.oregonstate.edu/home/)

**Turn in only your own work in your own words** on all course assignments, including the quizzes. To do otherwise is plagiarism and will not be tolerated. A few students in past terms have chosen to answer essay questions on quizzes by copying directly from the lectures. Because all quiz and exam questions come from the lecture material, this is easy enough to do. However, answers copied word for word from the lectures will receive a zero because they demonstrate no understanding of the material on the part of the student. You would also be cheating yourself of a valuable learning opportunity to get feedback on your comprehension of the material before the exams.

**Feedback on Quizzes and Exams:** After the due date for the quiz or exam has passed and the quiz or exam has been graded, you can view the quiz again through the Canvas gradebook. Additional explanation (feedback) will be made available for commonly missed questions. Take notes on the questions you missed to help study for exams.

**Assignments:** We will have three assignments that allow you to work with actual global change data or scientific literature on global change topics. Instructions for each assignment are posted in the weekly modules. Assignments are due at 10 pm on the Sunday ending the week indicated on the class schedule.

**Exams:** Exams are proctored, timed and only available for a limited time through Canvas (see course schedule). You must arrange for a proctor in order to take the midterm and final exam. The time limit for the midterm is 80 minutes, and 110 minutes for the final. Permission to take an exam outside of the scheduled window must be arranged well in advance. Proctors are not needed for weekly quizzes.
Exams are a mix of multiple choice and essay questions and are very similar to the weekly quizzes. Exams are based exclusively on the lectures. This means that if a topic in the textbook is not covered in the lectures, you will not be tested on it. Instead, the textbook is suggested as a resource to help you understand the lectures. Exams are closed book/closed note and you are not allowed to access the internet or any other part of the course in Canvas (such as the lectures) during the exam.

**Preparing for Quizzes and Exams:** Take notes on the lectures, guided by the objective and review questions included with each lecture. Make sure your notes answer these questions. Then, practice, practice, practice for quizzes and exams until you are able to answer the objective and review questions in each lecture without help from your notes, the lectures, or the textbook. If you can answer the review questions without using your notes, the Canvas lectures, or textbook, you have mastered the material and will do well on the quizzes and exams. If you cannot, make sure you can do so before the quiz or exam if you want to do well in the class. When preparing for an exam also make sure to review your weekly quizzes. Post questions to the general discussion board.

**Exam Proctoring Information:** Proctored exams are necessary to ensure the integrity of assessments in courses such as GEO 308 where students are tested on the information provided in the course lectures. **You must arrange for a proctor in order to access the exam.** However, the proctoring process is straightforward and flexible.

First, identify a suitable proctor in your area and make an appointment directly with that person to take your midterm and final exam. Check the course schedule posted in Canvas once the term begins for the dates the midterm and final will be open in Canvas. Exams will be available for a minimum of three days and you may take the exam at any time during that window. Permission may be granted to take an exam on an alternate date in extenuating circumstances if arranged well in advance with the instructor.

Acceptable exam proctors include college or university testing centers, college or university instructors, public librarians, school teachers, administrators, or counselors, educational service offices on military installations, and work supervisors (if your employer is paying for you to take this course). Unacceptable exam proctors include co-workers, friends, and relatives. Students who can come to Corvallis can take their proctored exams during testing sessions provided by extended campus, while students elsewhere can use testing centers at their nearest university or community college (see list of testing centers at [http://ecampus.oregonstate.edu/services/proctoring/](http://ecampus.oregonstate.edu/services/proctoring/)).

Once you have chosen your proctor and made an appointment with them, fill out the exam proctoring form at [http://ecampus.oregonstate.edu/services/proctoring/](http://ecampus.oregonstate.edu/services/proctoring/). You will need to include the contact information for your proctor. This step is necessary so that ecampus can send your proctor the information for your exam, such as the access code. When you arrive for a proctored exam, your proctor will check your identification. You will then login to the course in Canvas, navigate to the exam, and your proctor will enter the password to open the exam. The exams in Canvas work the same way that the weekly quizzes do. You are allowed 80 minutes for the midterm; 110 minutes for the final.

**General Discussion Board:** Please post questions about the course, assignments, lecture content, etc. to the general discussion board if other students are likely to benefit from the answer to that question (otherwise, communicate with the instructor privately via email). I check the discussion board frequently and will reply by posting answers to your questions within 24 hours (usually less). This procedure allows the entire class to benefit from the questions and answers provided—chances are if you have a question others have the same question.

**Other Questions?** Contact your instructor by phone (541-737-1230) or email ([yalcink@geo.oregonstate.edu](mailto:yalcink@geo.oregonstate.edu)). Email is the best way to reach me because I am online a lot more than I
am sitting by the phone. Include a descriptive subject line with the course number, for example “GEO 308 Week 1 Quiz” if you have a question about the first quiz.

Because this is an online class, all communication will take place via the Canvas discussion board (a public forum open to everyone in the class) or private email and/or communication directly between student and instructor. I will respond quickly to email or the discussion board, usually within the same day or first thing the next morning. Office hours or on-campus help is not normally available to ensure equal access for all students in the course regardless of where they are located. If you have found that face to face interaction is essential for you to succeed in a course, then you should not take this course online. GEO 308 is offered on-campus during the winter term each year. However, if you do come to the Corvallis campus I encourage you to stop by my office in 250 Wilkinson Hall to introduce yourself as I enjoy meeting as many of my online and distance-education students as possible.

Email: I will use your OSU ONID email address to contact you should the need arise, such as a problem with your quiz or lab. If you have not done so, set up your ONID email account using your OSU ID number and pin at [http://onid.oregonstate.edu/docs/gettingstarted/signup.shtml](http://onid.oregonstate.edu/docs/gettingstarted/signup.shtml). If you do not regularly check your ONID email account, set it to automatically forward emails to your preferred email address (see frequently asked questions on the ONID web page).

**Responsibilities of Students and Instructor:** Teaching and learning is a partnership between student and instructor. Both student and instructor have certain responsibilities in this partnership that they must fulfill for the teaching (what the instructor does) and learning (what the student does) to be successful. If either student or instructor fails to carry out their responsibilities in this partnership, the student will not be successful in the class. Following is a partial list illustrating these responsibilities:

**Responsibilities of Instructor:**
- Make clear statements of course and lesson objectives
- Provide course materials (lectures, readings, etc) directly related to these objectives and keep the course materials as current as possible with ongoing revisions and updates
- Provide assessments (quizzes, exams) and other graded activities (discussion, writing assignments, etc) that have clear connections to the course objectives and provide students different ways to demonstrate the degree to which they understand the content covered in the course
- Provide feedback on graded work that is both useful and timely
- Be accessible and available to students who want help

**Responsibilities of Students:**
- Be familiar with the course structure and the policies by which the course is taught
- Become personally invested in their education (time, money, commitment) and accountable
- Dedicate regular amounts of time to the class on an ongoing basis throughout each week
- Complete all assignments on time and always put forth their best effort. Review the results of graded work and learn from both successes and failures.
- Ask the instructor questions when clarification is needed

**Netiquette and Acceptable Use Policy:** The same standards of civility and conduct that apply in a classroom environment also apply to online courses. In this class, Canvas is our classroom and you must interact with your classmates and instructors through Canvas in the same way you would interact in a classroom. In particular, the Canvas discussion board is a place to ask questions, not post complaints. The instructor will moderate student-student communication on Canvas. Any discussion board posts that, in the instructor’s judgment, do not contribute to a productive learning environment or maintain classroom standards of civility will be removed. In such cases the instructor will either communicate with the student privately via email or refer the student to ecampus. If a student has acted in a disrespectful manner
towards other students, the instructor may penalize that student’s discussion board grade. First offense will result in loss of participation points for that discussion board topic. Second offense will result in loss of participation points for that discussion board topic and all future discussion board topics.

All use of Canvas will be transparent and take place in a public forum open to all – the Canvas discussion board. Private or offline communication through Canvas is not allowed because Canvas is our classroom for an online class – as such discussions must be open and accessible to the entire class including all students and the instructor. If you have a question or concern that you are not comfortable sharing with the class, please email the instructor directly.

**Students with Disabilities:** Accommodations are collaborative efforts between students, faculty and Disability and Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

**Academic Conduct:** Students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- cheating- use or attempted use of unauthorized materials, information or study aids
- fabrication- falsification or invention of any information
- assisting- helping another commit an act of academic dishonesty
- tampering- altering or interfering with evaluation instruments and documents
- plagiarism- representing the words or ideas of another person as one's own

The goal of Oregon State University is to provide students with the knowledge, skill and wisdom they need to contribute to society. Our rules are formulated to guarantee each student's freedom to learn and to protect the fundamental rights of others. People must treat each other with dignity and respect in order for scholarship to thrive. Behaviors that are disruptive to teaching and learning will not be tolerated, and will be referred to the Student Conduct Program for disciplinary action. Behaviors that create a hostile, offensive or intimidating environment based on gender, race, ethnicity, color, religion, age, disability, marital status or sexual orientation will be referred to the Affirmative Action Office.

**Course Evaluation:** We encourage you to engage in the course evaluation process each term – online, of course. The evaluation form will be available towards the end of each term, and you will be sent instructions by Ecampus. You will login to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.