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 306 MINERALS, WATER, ENERGY, AND THE ENVIRONMENT (3 CREDITS)

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

Read the entire syllabus before beginning the class. Save the syllabus for reference during the term.

Course Catalog Description: Geologic occurrences, environmental consequences, and future of non-renewable earth resources, including metals, materials, oil, soil, and groundwater.

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 Science, Technology, and Society.

Course Rationale: Our society depends heavily on the availability of earth resources. Mineral resources are used to make everything from computer micro-chips to kitty litter. Energy resources literally power our technological society. We depend on all types of earth resources to grow the food we eat, for the water we drink, even the air we breathe. However, earth resources are formed by geologic processes that operate very slowly over millions of years and in most cases must be considered limited and non-renewable resources. Furthermore, all stages of resource exploitation and use can have negative environmental consequences, from land disturbance to water, air, and soil pollution, to waste disposal. We will use the scientific framework provided by geology to describe the formation and distribution of mineral, energy, water, and soil resources; examine environmental problems associated with resource use such as air and water pollution and climate change; and discuss the challenges of meeting expanding demand for earth resources in the 21st century with a finite resource base and the threats these challenges pose to maintaining our standard of living.

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

Note: when sending an email, include a descriptive subject line with the course number (for example, GEO 306 Week 1 Quiz if you have a question about the first quiz). Use your ONID 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.

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 Word and PowerPoint. Students will also need Word or access to a MS Office compatible word processing program. 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 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: Fundamentals of Geology and Mineral Resources
Week 2: Abundant and Scarcely Minerals
Week 3: Other Mineral Resources: Building Materials, Chemicals, Fertilizers
Week 4: Surface and Groundwater Resources
Week 5: Midterm Exam
Week 6: Energy Resources: Fossil Fuels
Week 7: Consequences of Fossil Fuel Use: Air Pollution, Climate Change
Week 8: Nuclear Energy and Radioactive Waste Disposal
Week 9: Renewable Energy, Population Growth
Week 10: Soil as a Resource; Waste Disposal and Landfills
Week 11: Final Exam

Learning Outcomes: Students taking GEO 306 will be expected to:
1. Describe the geology of earth’s mineral, energy, soil, and water resources, their global distribution, and the processes that formed them.
2. Recognize that many of earth’s resources must be considered finite and non-renewable due to the amount of time required for geologic processes to form them.
3. Describe trends in resource use through time and compare and contrast trends in resource consumption between the developed and developing countries. Evaluate our future prospects for continued resource availability given current trends in demand.
4. Assess the impact of resource exploitation and consumption on the global environment and evaluate strategies for minimizing these impacts.
5. Develop an informed position about current issues related to the use of earth resources and convey that position to others through effective writing.

Students taking this baccalaureate core class in science, technology, and society will be expected to:
1. Analyze relationships among science, technology, and society using critical perspectives or examples from historical, political, or economic disciplines. Lectures, readings, and class discussions will demonstrate that our modern society depends on the continued availability of earth resources; yet
current patterns of use jeopardize their continued availability with consequences for the way we live our lives. We will see examples of how uneven distribution of earth resources, as well as uneven levels of consumption, have resulted and will continue to result in societal and geopolitical conflict. We will also see examples of the current debate over policies to ensure continued resource availability while minimizing damage to the environment and students will be asked to take informed positions on these issues.

2. Analyze the role of science and technology in shaping diverse fields of study over time. Knowledge of the formation, distribution, and use of earth resources, and the related issues that result, exists at the intersection of geology, geography, economics, policy, and law, and we will see many examples of intersections between these subject areas in this course. We will see how patterns of resource development and use have changed with the development of human civilization, as well as how our relationship to earth resources and our attitudes towards their use have changed over time.

3. Articulate in writing a critical perspective on issues involving science, technology, and society using evidence as support. Students will evaluate policy issues regarding control of or access to earth resources, or managing the consequences of resource use, in weekly discussion board topics and more formal 2-page writing assignments (position statements). Students will be expected to take informed positions on these issues and cite factual evidence that supports their position from published sources. Weekly quizzes and the final exam include essay questions where students will be required to synthesize evidence and draw conclusions about earth resources and the consequences of their use.

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 position statement assignments that emphasize technical writing, critical thinking, and identification and use of factual supporting evidence whenever possible.

Course Organization: Students in GEO 306 will work through 10 one-week lessons grouped into weekly modules in Canvas. Each week includes reading, taking notes, and answering review questions on two lectures (presented as both word documents and accompanying 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 exam. Students will also participate in weekly discussion boards through Canvas on an instructor chosen topic related to Earth resources and their use.

From the lectures, readings, and discussions, students will develop three written (900-1200 word) position statements on a question or issue raised by the instructor related to earth resources and use. Last but not least there are two exams: a midterm (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 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, a midterm exam and cumulative final exam, three position statements (on issues or questions raised by the instructor), and a weekly grade for discussion board participation. These are weighted according to the following table:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Weight</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (9 @ 20 points each)</td>
<td>180</td>
<td>31%</td>
</tr>
<tr>
<td>Discussion Board Participation (9 weeks @ 10 points each)</td>
<td>90</td>
<td>16%</td>
</tr>
<tr>
<td>Position Statements (3 @ 30 points each)</td>
<td>90</td>
<td>16%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>100</td>
<td>17%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>120</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td>580</td>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

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

- **A** > 92% of points possible
- **B-** > 80% of points possible
- **D+** > 68% of points possible
- **A-** > 90% of points possible
- **C+** > 78% of points possible
- **D** > 62% of points possible
- **B+** > 88% of points possible
- **C** > 72% of points possible
- **D-** > 60% of points possible
- **B** > 82% of points possible
- **C-** > 70% of points possible
- **F** <60% of points possible

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. Discussion board questions or topics are posted weekly by the instructor (there is no discussion board during the weeks of the midterm and final exams). You can earn up to 10 points for participation per week 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 10 pm Wednesday and (2) post at least two substantive responses to a classmate’s post by 10 pm Sunday. 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.

Position Statements: Instead of a single long term paper, you will write three 900-1200 word position statements during the term on topics related to earth resources and their use. For example, after a suitable point in the lectures, I will ask you to take a position on the following issue: Should carbon dioxide emissions from fossil fuel use be limited? Why or why not? Your task will be to critically evaluate the issues, develop an informed position that considers all the available information, and use factually accurate evidence, logical arguments, and effective writing to support your position. Position statements
will be graded on writing style, the use of objective, logical, and well-grounded arguments, the selection of credible and rigorous sources, and the correct use of references and citations.

Position statements will follow a prescribed format (to be explained when the first position statement is assigned) and must include at least two correctly cited references from outside the class materials (i.e., not counting the lectures or textbook). Position statements will be submitted and grades/comments returned electronically through Canvas using the links in the module for the week the assignment is due. Suggested reading on each topic will also be posted in Canvas to get you started.

**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/

**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.

**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 about the material to the general discussion board.

Exam Proctoring Information: Proctored exams are necessary to ensure the integrity of assessments in courses such as GEO 306 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/).

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/. 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). 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 307 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 other 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 306 is offered on-campus during the spring 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. 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. 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 ask questions

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 for communication, whether with the instructor or with other students, 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.

**Academic dishonesty also includes plagiarizing** the work of others and passing it off as your own on exams, in the discussion board, or on the assignments. Plagiarizing will also not be tolerated. The first incident of academic dishonesty will result in an F on the assignment. The second incident will result in an F for the course and referral to the student’s academic dean for disciplinary action. Severe incidents of academic dishonesty, such as cheating on an exam by using the internet as a source of information during the exam, may result in an F for the course and referral to the dean even if it is the student’s first offense. For more information on academic conduct and dishonesty, see the OSU Statement of Expectations for Student Conduct: [http://oregonstate.edu/admin/stucon/achon.htm](http://oregonstate.edu/admin/stucon/achon.htm)

**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.