

Course Syllabus

Course Information

GEOS 3101.OS1

Professor Contact Information

Robert B. Finkelman
Office phone: 972-883-2459
E-mail: bobf@utdallas.edu
Office Location: FO2.220
Office hours: As required

Course Pre-requisites, Co-requisites, and/or Other Restrictions

None

Course Description

Environmental health issues are commonly associated with pollution caused by industrial activities such as smelting ore and anthropogenic products such as chemicals. However, natural materials such as rocks, minerals, soil, natural dust, and uncontaminated water and natural processes such as volcanoes and earthquakes affect the health of far many more people than does anthropogenic materials and processes. In this course you will examine these geologic materials and processes and see the varied and surprising ways that they impact human and animal health, causing widespread and severe health problems and having beneficial effects. Upon completion of this course you will have an essential understanding of the fundamental earth materials and processes, their properties, and how they impact with humans and animals affecting health. You will be able to explain the connections between the earth and certain health issues that affect many millions of people in the US and around the globe. As an outcome of this course you will have an appreciation not only of how people impact the earth but also of how the earth impacts people.

Learning in this course will be accomplished through assigned text readings, online learning resources, lectures, and handout material. Assessed work will include a brief (15 minute) oral presentation and a concise written report. Geoscience majors will be required to complete a term paper on a subject to be selected by the student with the approval of the instructor. There will be mid-term and final written exams. Principal topics covered will include: an overview of geologic materials and processes; examples of how trace elements, minerals, and ambient dust impact human health; examples of

how complex industries such as the power sector can impact human health; examples of how geoscientists and biomedical/public health researchers are teaming to find practical solutions to health problems, and: examples of the health benefits of geologic materials and processes.

Student Learning Objectives/Outcomes

Upon successful completion of this course you are able to:

- Describe different geologic materials and processes that can affect health
 - Discuss human health problems caused by natural materials
 - Explain how people are exposed to natural toxins
 - Give examples of health benefits of geologic materials and processes
 - Provide generalized solutions to health problems caused by geologic materials and processes
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Required Textbooks and Materials

None

Suggested Course Materials

Essentials of Medical Geology edited by Selinus et al. (2005)

Assignments & Academic Calendar

February 26	Welcome, Introductions, Course Summary
February 28	Overview of the Health Impacts of Geologic Materials
March 4	No Class
March 6	No Class
March 11	Spring Break
March 13	Spring Break
March 18	Natural and anthropogenic sources
March 20	Arseniasis & Fluorosis: A Case Study from China
March 25	Health Impacts of Coal: Should We be Concerned?
March 27	Mid-term Exam
April 1	No class
April 3	Health Impacts of Ambient Dust
April 8	Analytical Methods Used in Geology and Health Research
April 10	Occupational Health Issues & Other Medical Geology Issues
April 15	Health Benefits of Geol. Materials and Processes & the Future of Med. Geol.
April 17	Final Exam

Grading Policy

There will be a one-hour mid-term exam (March 27) and a final exam (April 17). The mid-term will be worth 40% of the final grade and the final will be worth 60%. Class attendance and participation may be taken into account for exam averages that are close to grade divisions.

Course & Instructor Policies

If a student can provide an **acceptable** excuse for not attending the mid-term exam, a term paper on a topic selected by the instructor may be substituted. Class attendance and participation may be taken into account for exam averages that are close to grade divisions. There may be an extra credit question on the final.

Technical Support

If you experience any problems with your UTD account you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.

Field Trip Policies Off-campus Instruction and Course Activities

There will not be a field trip.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD printed publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Series 50000, Board of Regents, The University of Texas System*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at <http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html>

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic Dishonesty, any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Copyright Notice

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provided by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. As a UT Dallas student, you are required to follow the institution's copyright policy (Policy Memorandum 84-I.3-46). For more information about the fair use exemption, see <http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm>

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD

furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)
disabilityservice@utdallas.edu

If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Disability Services. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Services to notify them of your eligibility for reasonable accommodations. Disability Services can then plan how best to coordinate your accommodations.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

These descriptions and timelines are subject to change at the discretion of the Professor.