

Course Syllabus

Course Information

Course Number/Sec NATS 1101-002
Course Title Natural Sciences and Mathematics Freshman Seminar
Term Fall, 2016
Days & Times MW 10:00 – 10:50 pm, SLC 1.202

Professor Contact Information

Professor John W. Geissman, Geosciences Department Head
Office Phone (972) 883-2403
Email Address geissman@utdallas.edu
Office Location ROC (Research Operations Center; nothing to do with rocks!) 21, Geosciences 2.301G and M; the ROC is on the NW corner of Waterview Parkway and Drive A.
Office Hours TR 10-11:15 am & W 1:00-3:00 pm (NOTE: I am the Department Head for Geosciences, and maintain an open door policy; in addition, I spend a LOT of time in my laboratory, which is located in the northwest corner of level one of the ROC building (room 1.501). I am happy to meet on campus, but I need advance warning.

Course Pre-requisites: none

Course Description:

This course is designed to introduce you, as a welcomed addition to the University of Texas at Dallas, to the intellectual and cultural environment of THE UNIVERSITY, the School of Natural Sciences and Mathematics (NS&M) and the SCIENCES IN HIGHER EDUCATION in general. All of you have decided to embark on furthering your education in a science field, and that, in my opinion, is laudable and outstanding! You, and your science colleagues of your age, not just at UTD but around the world, represent, in my opinion, the last great hope for humanity, before what is presently taking place on a global scale (The Sixth Extinction) simply overwhelms the human race, and human population on Earth is substantially reduced and the matter of human sustainability becomes of the utmost importance. How is that for being blunt? You will quickly recognize that I am a very firm believer in the capability of anthropogenic activities to significantly and seriously modify the global environment in which we live, at least for now.

That said, your first two “assignments” in this class are (1) to read Chapter One of Craven, *What’s the Worst that Could Happen?*, which is available on eLearning and (2) to write a single paragraph that describes why you are at UTD and what do you expect to gain from your four years at UTD. Speaking of, I strongly encourage you to check out all of the material that is available on eLearning; all of your assignments are based on material available through eLearning. In this “course”, you will learn about plans of study and career paths for majors in Biology, Chemistry, Physics, Mathematics, Geosciences, and Science and Mathematics Education. Basic learning, study, problem solving and other skills needed to HELP YOU succeed as an NSM major will be covered. An overview of the connections within the

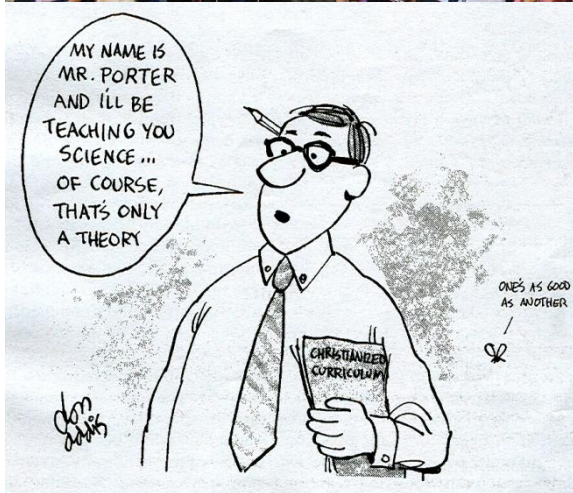
disciplines of Natural Sciences & Mathematics will be presented, as well as their relationship to engineering, medicine and health, and other fields.

Next to finally, remember that science is the **ONLY** way of knowing, contrary to the “beliefs” of a very large percentage of US citizens, about the natural world, and that certain terms in science, for example the word theory, have very special meanings.

And finally, I should note that one or two UTD upperclassperson science majors (First Year Leaders, FYLs) will be assigned to assist in the instruction of this section. I welcome them with very open arms, and I hope that you will, as well! Typically, I will be responsible for our meeting on Mondays, and your distinguished colleague will handle the Wednesday meeting.

All of this said, I need to inform you about the fact that some of our Monday meeting times I will not be able to make, and I apologize. I will miss the first two Mondays, as I will be in South Africa, leading a major field excursion for geoscientists from all over the world in an area that I have had the pleasure of working in for several years. After the field trip, I will be giving several talks at the International Geological Congress in Cape Town. Then, I confess that I have another round of field geologic work to conduct in northwest Vietnam and Laos in mid-October. The exact dates of that excursion are still being worked out.





Student Learning Objectives for NATS 1101 Have Evolved over the Past Few Years

Student Learning Objectives/Outcomes (first version):

Upon completing this course, students will gain:

- (a) An understanding of the science professions and the degree programs leading to them.**
- (b) An appreciation and understanding of professional ethics in science and elsewhere**
- (c) An appreciation and practice of basic skills essential to success in science majors including problem solving skills, communications skills, team work, note-taking.**
- (d) An appreciation of working together, with some of your colleagues, to prepare a robust and convincing scientific presentation on a “Grand Challenge” of your choosing.**

Revised (8/2015) and updated Student Learning Objectives/Outcomes:

Upon completion of this course, students will:

- (1) Begin the development of Critical Thinking Skills needed in the Scientific process**
- (2) Begin the development of Communication Skills required to explain scientific concepts**
- (3) Begin the development of Empirical and Quantitative Skills needed in the Scientific process**
- (4) Begin the development of Teamwork needed in the Scientific process and community**
- (5) Begin the development of Social and Personal Responsibility and ETHICS required in the world and society at large.**
- (6) Understand how to develop and plan for long-term goals.**

Revised (8/2016) and updated Student Learning Objectives/Outcomes:

Upon completion of this course, students will:

- (1) Develop an enhanced level of student reflection and self-awareness**
- (2) Have begun an engagement in university life**
- (3) Be better prepared to succeed academically**
- (4) Have an increased knowledge about their major, school, and future career**

And the Latest (8/9/2016) Version of Student Learning Objectives/Outcomes

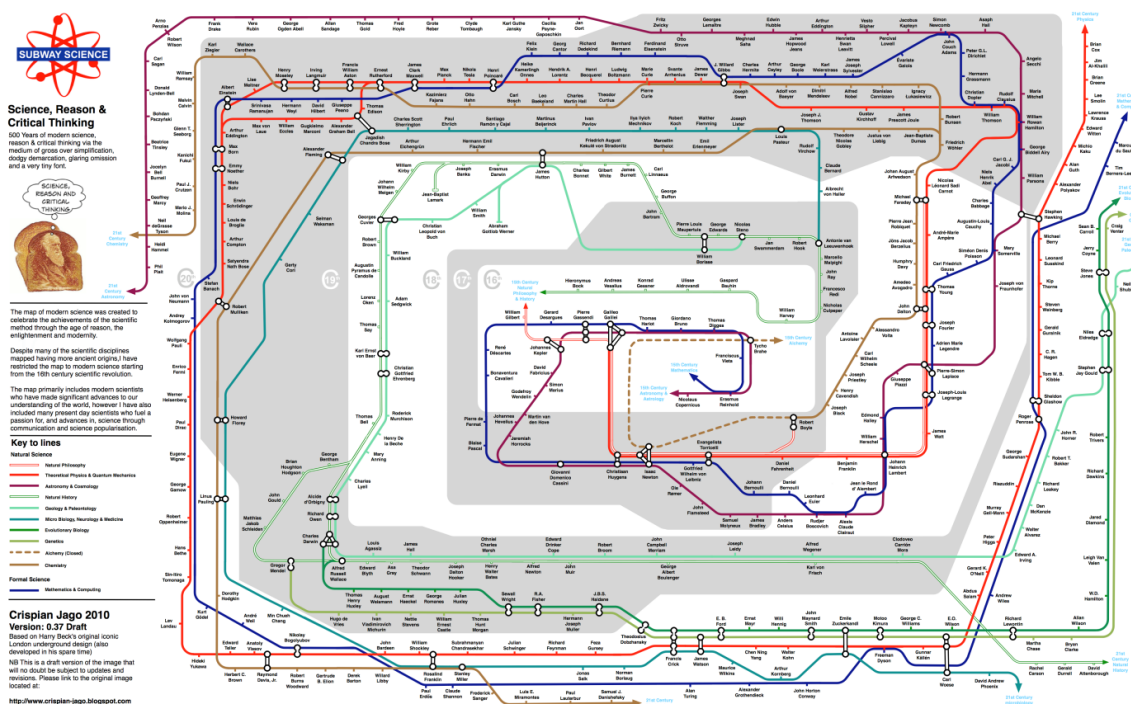
Upon Completion of this course,

- (1) Freshmen will be able to relate the core curriculum learning outcomes and degree program outcomes to the goal of being an educated individual in a democratic society after completion of their degree.
- (2) Freshmen will examine their own skills as an incoming university student through self-assessment: then compare their assessment to the skills necessary for success as university students including critical thinking skills, communication skills, teamwork skills, empirical and quantitative skills, and social and personal responsibility.
- (3) Freshmen will use new skills presented in the course as a roadmap to academic success.
- (4) Freshmen will be integrated into the university community.

Course required assignments will pertain to building a personal portfolio and developing teamwork skills, including making a “team video”, although I am by no means certain how that is to be done and I certainly have not received any instructions about it.

The core objectives, as required by the Texas Higher Education Coordinating Board, include:

- (1) Oral Communication Skills
- (2) Teamwork
- (3) Social Responsibility
- (4) Personal Responsibility



Required Textbooks and Materials:

None; however numerous readings are available on eLearning for the class, and these are updated on a regular basis. Please feel free to enjoy them!

Assignments & Tentative Academic Calendar:

<u>Date</u>	<u>Area</u>	<u>Faculty Topic</u>	<u>FYL Topic</u>	<u>CLO (2015)</u>	<u>Assignments</u>	<u>Notes/ Comments</u>
W1, 8-22,24		Introduction to THE UNIVERSITY and WHY 1101?; Intro to Learning and Thinking	Intro to UTD	1	HW#1 due on Sept. 9	MUST TAKE CLA+ in testing center
W2, 8-29,31	Success as a Student	Intro to Learning and Thinking; Reading and learning in the classroom		1,2,4		
W3, 9-7		No Class on Monday (5), Introduction to Student Project; The Library, the sum total of Science	Managing a College Environment	2,6		
W4, 9-12,14		Time management and schedule organization	Academic Communication	2,3	HW#2 avail.	
W5, 9-19, 21		Studying, Taking notes, test taking; <u>Short Quiz</u>		2,4		
W6, 9-26, 28		Oral and Written communication (incl. electronic)		2,4		
W7,10-3,5	Scientific Method	The structure of scientific fields; structure of NSM at UTD		2,4	HW#2 due on Oct. 5	
W8, 10-10,12		Introduction to Experimentation; Correlation vs. Causation Ethics and technology	Midterm madness	3	HW#3 avail.	
W9, 10-17,19		Project in class work (JWG in Turkey)	Planning for future classes	2,5		
W10, 10-24,26		Ethics and Technology; Ethics and UTD	Civility in a Diverse society	5	HW #3 due on Oct. 26.	
W11, 10-31,11-2		"Quiz" — Go to a meeting of a Student Academic Organization at UTD; prepare a report (JWG at GSA meeting)	Getting Involved	5,6		
W12, 11-7,9		Building Communities and Positive Interactions	Wellness	6		
W13, 11-14,16		Grand Challenge Presentations	Substance Abuse			

W14, 11-21,23		No class, Fall Break				
W15, 11-28,30		Grand Challenge Presentations	Life Skills			
W16, 12-5		Grand Challenge Presentations			Written Summaries of Each Grand Challenge Team Due on Dec. 10.	
		There is NO “Final Exam” in this class!!!				

Note: CLO means “covers learning objective” such and such.....

Grading Policy and Notes about Classes:

1. I very strongly urge you to take notes in class. For two of the classes, you will be required to re-write and reorganize your notes, and turn in the rewritten notes. They will be graded.
2. The Grand Challenge presentations will be late in the semester, and will constitute 30 percent of your grade.

Final grades will be based on the following:

Attendance	20% <u>(please note that I will have a sign in sheet every Monday and Wednesday, so please sign in!!!)</u>
Homework (3 or 4 assignments)	30 %
Class Notes (2)	10%
Class participation	10 %
Grand Challenges	30 %
TOTAL	100%

Course Policies:

Exams(not pertinent for this class)

1. **Valid picture ID (Comet card or drivers license) must be on your desk during exams. These will be checked.**

Homework

1. You are welcome to work together on homework but everyone must do and turn in their own written work.
2. Late homework will have a severe penalty.

Class Notes/Quizzes/Class Participation

1. Power point presentations that I use in class are available in eLearning; feel free to download. I'll try to have them available before each lecture, so that you can **Come to Class with these notes**. I will strive to entertain you.
2. Keeping a notebook of what is discussed in class is an extremely good idea. You will be required (as above) to turn in your revised notes for three classes.

Classroom Citizenship

1. Please do not disrupt your neighbors by talking to one of your colleagues during class times.
2. Please; Cell phones must be turned off during all class time.
3. Please do not disrupt the class by getting up and leaving the class.
4. Please **DO** speak out during class! Voice your opinion! This class is yours!

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 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, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, 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).

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 includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

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.

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)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

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.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information

regarding these rules and regulations may be found at the website address given below. Additional information is available from the office of the school dean. (http://www.utdallas.edu/Business_Affairs/Travel_Risk_Activities.htm)

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

Important Dates:

Classes start	8/22 (Monday)
Last day to add	9/2
Census day, last day to drop w/o W	9/7
Drop w/ WL begins	10/7
Mid term grades due	10/17
Last day to drop w/ WP or WF	10/28
Last day of class	12/7
Reading Days	12/8
Final Exams	12/9-15
Final grades due	12/16
University Closings:	
Labor Day	9/5
Fall Break	11/21-23(actually entire week)