



## Syllabus

### NATS 1101.005 NS&M Freshman Seminar

Discovery of a juvenile *Alamosaurus* dinosaur by HM in Big Bend National Park

## Meeting time and place

Time..... Thursday 9:00-9:50 a.m.

Place .... ECSS 2.306

## Professor's contact information

Email .....mont@utdallas.edu (response always within 24 hours)

Cell phone.....469.951.8110 (response to text within minutes or hours)

Office phone .....972.883.2480 (not the best choice)

Office.....FN 3.308H

Office hours ..... W 1-5 / Other times by appointment

Other Information .....Please get in touch whenever you have questions

## Course pre-requisites, co-requisites, and/or other restrictions

Co-requisite .....UNIV 1010

## Course description

**NATS 1101 - Natural Sciences & Mathematics Freshman Seminar** (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Natural Sciences and Mathematics (NS&M). Students will learn about plans of study and career paths for majors in Biology, Chemistry, Physics, Mathematics, Geosciences, and Science and Mathematics Education. Basic study, problem solving and other skills needed to 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. Required for all first time in college freshmen in NS&M. Co-requisite: **UNIV 1010**. (1-0) Y

## Student learning objectives/outcomes

Upon completing this course, students will have:

1. a better understanding of science and mathematics professions and their associated degree programs
2. had advice-filled conversations with students who have been successful in NS&M
3. an appreciation of professional ethics
4. an appreciation of and practice in basic skills essential to success for science majors including expertise in note-taking, problem solving, writing, and communication
5. practical experience in problem solving while working with a team

## Notes about the process

1. The inquiry process is as important as the answer, perhaps more so. [Critical thinking](#) is “reasonable reflective thinking focused on deciding what to believe or do.”
2. In an effort to extend point 1, we will address [21<sup>st</sup> Century Skills](#).

3. Note that you must prepare in advance for class. This is called [flipping a class](#).
4. Note that you must look ahead to be certain you do not miss assignments that are due at the first of the next class.

### Textbooks and other materials

1. There is no textbook
2. Readings, videos, etc. are assigned for several classes. Always review these before class. There will be a two-minute [quick write](#) sometime during each class.

### Attendance

1. The weekly two-minute [quick write](#) also counts for attendance.
2. Only a written excuse from a proper authority such as a physician will excuse an absence.

### Topic & Assignment Schedule (\* = assignment due)

Date	Class/Topic	Assignments (activities in groups, assignments turned in by individuals)	Sources
8/29	Class 1: Debunking rubbish science and rigged data, making ethical decisions, and other fun diversions	Assemble groups for the semester. Watch video. Write a half-page report on a real-world example that you discovered during in-class research. As always, cite references!	<a href="#">Bad science</a>
9/5	Class 2: Note taking	Discuss advice from UC Berkeley in class. Write a half-page critique of your usual practice of note taking. Rewrite critique after class. *#1. Turn in your report from Class 1 (all assignments due just before class begins).	<a href="#">Advice from UC Berkeley</a>
9/12	Class 3: Learning	Before class read as many items as you can in this blog about learning. Take notes. Discuss best practices in class. Rewrite notes about learning after class. *#2. Turn in your personal note taking critique.	<a href="#">The Brilliant Blog</a>
9/19	Class 4: Writing (abstracts)	Before class, read about writing abstracts. Discuss the importance of writing well. *#3. Turn in your notes about learning.	<a href="#">Advice from UC Berkeley</a>
9/26	Class 5: Creativity ("there is an intrinsic value in creating for the sake of creating")	Watch the video. Take notes. Discuss creativity in class. Rewrite notes after class.	<a href="#">Rodney Mullen</a>
10/3	Class 6: 21 <sup>st</sup> Century Skills	Work your way through this matrix. Discuss skills in class. *#4. Turn in your notes about creativity.	<a href="#">21<sup>st</sup> Century Skills</a>

10/10	Class 7: Guest speaker	Career paths for majors. Take notes. These skills will likely apply to your future college career. *#5. Turn in your notes about 21 <sup>st</sup> Century Skills	
10/17	Class 8: Guest speakers	NS&M seniors who have mastered the system will speak and answer questions. Take notes.	
10/24	Class 9: Guest speaker	Career paths for majors. Take notes.	
10/31	Class 10: No meeting. Dr. Montgomery will be at the Geological Society of America meeting in Denver	Read about Hurricane Sandy. There are numerous sources. Your job is to assess the damage, and to plan for the future. You will work in groups on various solutions. *#6. Turn in notes from Classes 7-9.	<a href="#">NOAA</a>
11/7	Class 11: Semester project	Work on project. Your professor will visit with each group. Progress should be apparent. *#7. Turn in a half-page write up that outlines the Hurricane Sandy issue your group will address.	
11/14	Class 12: Semester project	Work on project. Your professor will visit with each group. *#8. Turn in five <a href="#">peer-reviewed</a> resources that relate to your group's research.	
11/21	Class 13: Semester project	Work on project. Your professor will visit with each group to preview upcoming presentations.	
11/28	No class		
12/5	Class 14: Semester project	Present your completed project. The format will be a strict <a href="#">Pechakucha</a> (modified as 10 slides x 15 second each. Peer-reviewed references are mandatory. There will be one grade for each group.	

### Grades (points)

- Attendance (via quick writes that must be correct for complete credit): 30 points (2 points each week with a special question for QW 15). Submit on eLearning only between 8:55 a.m. and 9:05 a.m. each Thursday. The first has an open window for the entire week, but closes at 9:05 a.m. on Thursday. The subject for Quick Writes each week is what you learned in preparing for that particular class.
- Semi-weekly assignments turned in on eLearning: 40 points (complete and well executed = 5 points; mostly complete and well executed = 4 points; missing something and/or mediocre execution = 3 points; below par = 2 points; cursory effort = 1 point).

3. Final project: 30 points (Grading is by rubric. Everyone grades everyone else. Your professor has the final decision about grades, but rarely has needed to override a class decision. In general, students are tough, but fair.)

### **Credit/No Credit**

Credit will be assigned for a grade of 70% or more.

### **Course & Instructor Policies**

**Exams:** There are no exams in this course.

**Homework:** Notes and other assignments are due as shown on the schedule. Notes must be taken and then rewritten neatly and accurately before turning in on the date indicated. Notes may be word-processed or not. I sketch a lot, so my personal notes are frequently hand written.

**Semester Project:** The project grade is a team grade.

### **Policies and Procedures for Students**

**Make-up Assignments:** None without prior approval of instructor

**Extra Credit:** None

**Late Work :** Accepted only with appropriate written excuse

**Special Assignments:** None

**Classroom Citizenship:** Respect should be shown at all times.

**Student Conduct and 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 that 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 individuals 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 to 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 Grades** 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 22PO 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 enrolling 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 that are off-campus, out-of-state, or foreign are all 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 [www.utdallas.edu/BusinessAffairs/Travel\\_Risk\\_Activities.htm](http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm). Additional information is available from the office of the school dean. These descriptions and timelines are subject to change at the discretion of the professor.

**This syllabus is subject to change at the discretion of the professor.**

