CRNs: 18363 (ARTH 3399) and 15692 (ESCI 4315)
Class Meeting Times: Tuesdays and Thursdays, 4:30-5:50 p.m.
Classroom: Fox Fine Arts A458 (4th floor)
Professors: Dr. Thomas Gill (ESCI) and Dr. Melissa Warak (ARTH); course is co-taught

Dr. Gill
Email: tegill@utep.edu
Office Hours: Tuesdays/Thursdays 3:00-4:00, or by advance appointment.
Office: Geology 401A
Office Phone: (915) 747-5168

Dr. Warak
Email: mcwarak@utep.edu
Office Hours: Tuesdays/Thursdays 3:00-4:00, or by advance appointment.
Office: Fox Fine Arts A454
Office Phone: (915) 747-7849

ABOUT YOUR PROFESSORS
Dr. Thomas E. (Tom) Gill is Professor of Geological Sciences and Environmental Science and Engineering. His scientific work focuses on the connections between the different parts of the earth system and the environment, especially the relationship between the solid Earth and the atmosphere, and the geology and environment of deserts and drylands. Dr. Gill earned a B.S. in Atmospheric Science and a Ph.D. in Earth Sciences and Resources from the University of California at Davis. Growing up in Northern California as the son of two artists, he gained his love for landforms and the environment through frequent childhood trips with his parents to sketch and draw the landscapes of the mountains, desert, and Pacific coast. Dr. Gill’s primary research emphasis is the study of dust storms, their characteristics, their effects on the environment and people, and the use of remote sensing (satellite technology) in detecting the formation and transport of dust clouds. He has published approximately 70 peer-reviewed papers in scientific journals, and his work has been funded by grants and contracts from NASA, the U.S. Environmental Protection Agency, the National Science Foundation, the National Institutes of Health, and other agencies.

Dr. Melissa Warak is Assistant Professor of Art History and specializes in the relationship of music and sound to art of the twentieth and twenty-first centuries. Dr. Warak earned a B.A. in English literature and art history from Vanderbilt University, an M.A. in art history from the University of Texas at Austin, and a Ph.D. in art history from the University of Texas at Austin. Her current research focuses on the ways that visual artists from the mid-fifties to late sixties employed musical models in their work and she is writing a book about contemporary sound art. Other research interests include the history of abstraction, spirituality in modern and contemporary art, science and technology in modern and contemporary art, and astronomy in art. Her research has been supported by grants and fellowships from the National Portrait Gallery of the Smithsonian Institution, the Getty Research Institute, the Royal Music Association of the United Kingdom, The Menil Collection in Houston, the Crystal Bridges Museum of American Art, the Kress Foundation, the Yale University Art Galleries, and the Tate Modern, among others.
COURSE DESCRIPTION
This course uses interdisciplinary approaches to study intersections between art and science from the Renaissance to the present, with some exploration of modern contact with ancient and prehistoric phenomena. With a focus on the Earth and its environment, students will examine visual and material implications of landscapes, technology, environmental changes, weather, natural hazards and disasters, rocks and soil, the built environment, and human exploration of extreme environments. Each week will explore a specific theme and focus on particularly meaningful innovations in environmental science and technology that affected the ways art looked, was made, and understood, how artists thought about and disseminated these topics, and how environmental studies can learn from visual art, including visual analysis, material culture studies, and works of art as scientific data. Likewise, we will engage the science behind these visual experiments. Among others, students may examine case studies on artists such as Leonardo da Vinci, Joseph Wright of Derby, Charles Willson Peale, Vincent Van Gogh, Edvard Munch, Pablo Picasso, Damien Hirst, James Turrell, Cai Guo-Giang, Georgia O’Keeffe, Ansel Adams, and Olafur Eliasson, as well as present-day artists-in-residence with scientific expeditions. The course is not chronological in nature.

COURSE OBJECTIVES
During this course, students will acquire skills essential to both art historians and scientists, including the following:
1. Developing interdisciplinary writing skills.
2. Learning to find and use resources for answering research questions and problems.
3. Analyzing and critically evaluating ideas and arguments.
4. Developing synthetic thinking skills and understanding methodologies related to interdisciplinary study.

TEXTS FOR CLASS
Selected scholarly articles will be posted to the course’s related Blackboard page (see schedule). Students are responsible for downloading these from Blackboard. All readings need to be completed BEFORE the class period for the day.

GRADING POLICY
This course will have three exams. In addition, students will complete one research project. Students will also be graded on discussion participation in class; points will be assigned for both the first and second halves of the semester. A good rule of thumb is to try to contribute at least once per class (via ideas, questions, or responses to other students). Lastly, we will have ten short quizzes throughout the semester. There will be no makeup quizzes, but the lowest quiz grade will be dropped.

This course will be graded on a scale of 500 points.
Quizzes (10, but one dropped): 135 points
Participation I: 25 points
Participation II: 25 points
Exam 1: 75 points
Exam 2: 75 points
Exam 3: 75 points
Research Project: 90 points

Therefore, here is the point breakdown for grades:
448 – 500 points: A
397 – 447 points: B
347 – 396 points: C
297 – 346 points: D
000 – 296 points: F
**TAKING NOTES IN CLASS**

Note that laptops, tablets, etc. are only allowed for use in taking notes. Students caught using devices in distracting ways will have the privilege revoked.

Exam material will come from both ideas discussed in class and the readings that supplement lectures and discussions. Completing the readings is necessary, but will not take the place of attendance and participation in class. It is critical that students take notes in class. Using bullet points will help you write down more information. Vocabulary and important terms will be written on the Powerpoint presentation slides and you should pay special attention to these terms and the works of art where they may be applicable. Basic identifying information for each work will also be provided on the Powerpoints (artist name, title, date); these will be uploaded to Blackboard for your use. It is a good idea to date your notes so you know what we covered each day. It is also a good idea to take notes on the class readings.

**EXAMS**

Exams will be open note, so make sure to take notes extensively. Students will be allowed to use only the following resources on the exams: 1) notebook; 2) quizzes; and 3) printouts of readings (which you may highlight and annotate). You may not bring copies of the class Powerpoint presentations. The exams are not cumulative. See your professors during office hours for help improving your note-taking skills. Electronic devices will not be allowed during exams. Students will not be allowed to leave the room and may be asked to put phones and Apple Watches (or similar) at the front of the room during the exams.

**QUIZZES**

Students will take short reading quizzes at the beginning of each class on quiz days noted in the syllabus. Quizzes are NOT open note. Be sure to arrive to class on time. There are no makeup quizzes. The quizzes may be on one or all of the readings assigned and will likely be short answer, fill-in-the-blank, multiple choice, and/or true/false questions. To prepare for these, you should make sure to read the texts carefully and take notes on them in your notebook (this will also help with preparing for the exams). You may find it useful to skim the readings once for the larger issues at stake and then take notes during a second more careful reading. Be sure that you can identify the author’s arguments and the primary evidence used to support them. As you read, think critically about what might be useful about the texts for our course topic. We encourage you to discuss the readings and topics with your classmates.

***COURSE POLICIES***

**ATTENDANCE POLICY**

Attendance will be taken daily. Every unexcused absence beyond two will decrease your overall class participation grade by twenty points. Excused absences require either a doctor’s note or advanced permission from your professors. Students who are late or leave early will receive a half absence. DO NOT COME TO CLASS IF YOU ARE INFECTIOUS.

Students are responsible for acquiring notes and announcements made during missed classes, so make a friend and exchange contact information. Your professors will keep a running tally of absences in a column on the Gradebook section of Blackboard.

**EMAIL POLICY**

Your professors will email you through Blackboard. Make sure that you are receiving emails through Blackboard and that you have your UTEP email address on file. Please note that, due to FERPA regulations, your professors will not email with students about grades. If you have a question or concern about a grade, please visit office hours or make an appointment. Additionally, if you have a question that requires a long answer, please come see a professor in person to save time. Correspondence with your professors is considered part of your class participation, so keep it professional. Please direct emails to the professor in charge of your section (Dr. Warak for ARTH and Dr. Gill for ESCI).
PHONES
Cell phones should be silent and kept out of sight. You will be reprimanded if you are caught using your phone in the classroom; repeat offenses will result in being asked to leave class with an absence penalty.

CLASSROOM ETIQUETTE
Please be respectful of other students in the classroom. The classroom door will be open for five minutes after class begins; after that, tardies will be given. There are outlets for charging devices in the classroom, but please come to class with a charged laptop. Inappropriate behavior includes coming late or leaving early, using phones or electronic devices for any reason, passing notes, excessive whispering with friends, and packing bags before class is over. Use the restroom BEFORE class, as entering or leaving the room is very distracting. Inappropriate behavior in the classroom may result in a directive to leave class or being reported to the Dean of Students for disciplinary action in accordance with UTEP policy. You may bring food and drinks, but the drinks must have a sealable lid. A note on bags: please make sure your bag is small enough to fit fully under your chair. If not, you will be asked to put it to the side of the classroom. Art supplies, gym bags, and other items will need to be stored on the shelves in the classroom to keep the floor tidy.

MAKE-UP POLICY
The paper assignment sheet explains a late work policy. There are no makeup exams or quizzes, except in extreme circumstances documented with the Dean of Students. Plan your semester accordingly.

ACADEMIC DISHONESTY AND PLAGIARISM
All instances of suspected academic misconduct in this course will be referred to the Office of Student Conduct & Conflict Resolution and may result in failure in this course. All students are expected to engage in their academic pursuits in a professional manner and to maintain honesty and integrity. Students are responsible for knowing the requirements of academic honesty set forth by UTEP. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty. See the UTEP policy on academic integrity and scholastic dishonesty: https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html

POLICY FOR STUDENTS WITH DISABILITIES
Accommodations will be made for students with limitations due to disabilities provided that they are registered with the Center for Accommodations and Support Services (CASS) and procure the proper documentation: http://sa.utep.edu/cass (telephone: (915) 747-5148). Students with documented disabilities should make sure that the professor receives the appropriate paperwork from CASS within the first week of class. Please note that CASS is available to help students with any disabilities, documented illness (including anxiety, depression, and PTSD), and in the case of short-term disability (broken bones, etc.).

POLICY FOR STUDENT ABSENCES ON RELIGIOUS HOLY DAYS
Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Section 51.911 (a) (2) defines a religious holy day as: “a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20....” See your professors at least a week in advance if you intend to miss class in observance of a religious holy day.
**TENTATIVE COURSE SCHEDULE** (subject to change)

**Tuesday, August 27**
Topic: Introduction and syllabus review

**UNIT 1: Art and Environmental Science as Interdisciplinary Fields of Study**

**Thursday, August 29**
Topic: What is earth and environmental science, what is art history, and how do the two intersect? (Dr. Gill and Dr. Warak)
Readings:
*Encyclopedia of Earth* (online, peer-reviewed wiki at [https://editors.eol.org/eoearth/](https://editors.eol.org/eoearth/)), the following articles:
https://editors.eol.org/eoearth/wiki/Ecology_(Biology)
https://editors.eol.org/eoearth/wiki/Physical_geography
https://editors.eol.org/eoearth/wiki/Natural_environment
https://editors.eol.org/eoearth/wiki/Ecology_(Biology)
https://editors.eol.org/eoearth/wiki/Earth_systems_engineering_and_management


**Tuesday, September 3**
Topic: Art and Science in the Renaissance and in the Age of Enlightenment: Leonardo da Vinci and Joseph Wright of Derby (Dr. Warak)
Readings:

**Thursday, September 5**
**Quiz 1**
Topic: Scientific Perspectives, Paradigms, and Learning and Caring about the Earth from Art (Dr. Gill)
Readings:

*Encyclopedia of Earth: The Roots of Preservation in America*: Online at https://editors.eol.org/eoearth/wiki/The_Roots_of_Preservation_in_America:_Emerson,_Thoreau,_and_the_Hudson_River_School


**Tuesday, September 10**

Topic: What Art Learns from Science (Dr. Warak)

Readings:


**Thursday, September 12**

**Quiz 2**

Topic: Geochemistry and Art: Pigmentation, Authentication, Conservation (Dr. Gill)

Readings:


Tuesday, September 17
Topic: Case Studies in Conservation and Restoration (Dr. Warak)
Readings:

Thursday, September 19
Quiz 3
Topic: Excerpts of Cave of Forgotten Dreams, dir. Werner Herzog / Exam Review (Dr. Gill and Dr. Warak)
Reading: Ebert, Roger. “Review: Cave of Forgotten Dreams.” Rogerebert.com, April 27, 2011. PDF is on Blackboard, but you may read the digitized article online here: https://www.rogerebert.com/reviews/cave-of-forgotten-dreams-2011

Tuesday, September 24
***Exam 1***

UNIT 2: The Solid Earth

Thursday, September 26
Topic: Bio-art (Dr. Warak)
Readings:

Tuesday, October 1
Quiz 4
Topic: Learning about the Landscape from Painting (Dr. Warak)
Remote session with Dr. Emily Burns, Auburn University
Readings:

**Thursday, October 3**  
Topic: Scientific Understanding and Interpretation of Environment from Landscape Paintings (Dr. Gill)  
Readings:  

**Tuesday, October 8**  
**Quiz 5**  
Topic: Optics and Art through Claude Monet and Georges Seurat (Dr. Warak)  
Readings:  

**Thursday, October 10**  
Topic: Georgia O’Keeffe and The Environment and Landscape of New Mexico (Dr. Gill)  
Readings:  
Robertson, Martha. "Messages from the Far-away: Willa Cather’s and Georgia O’Keeffe’s Visionary Landscapes of the American Southwest." Language and Culture: Bulletin of the Institute for Language Education 16 (2007): 79-98 (Note: The section on Cather on pp. 81-87 is not required.)

***October 11-13, optional volunteer trip to Marfa, TX for Chinati Open House Weekend; see Dr. Warak for details***

**Tuesday, October 15**  
Topic: Ansel Adams and the National Park Service (Dr. Warak)  
Remote discussion with Amy Bracewell, Superintendent of Saratoga National Historical Park (U.S. National Park Service)  
Readings:
U.S. National Park Service, Department of the Interior. “A Brief History and Description of the National Park System” (1966). PDF is on Blackboard, but you may read the digitized article online here: https://irma.nps.gov/DataStore/DownloadFile/483154


Watch:

**Thursday, October 17**

**Quiz 6**

**Topic:** Repeat Photography to Document Environmental Change (Dr. Gill)

**Readings:**


Malde, Harold E. “Repeat Photography at Chaco Canyon Based on Photographs Made During the 1896-1899 Hyde Expedition and in the 1970s.” Report prepared for the National Park Service.


**Tuesday, October 22**

**Topic:** Artists Retreat to the Landscape: Artist Colonies in the U.S. (Dr. Gill and Dr. Warak)

**Readings:**


“Provincetown History: The Art Colony, A Brief History.” PDF is on Blackboard, but may read online here: http://www.iamprovincetown.com/history/art-colony-history.html

**Thursday, October 24**

**Quiz 7**

**Topic:** Buckminster Fuller, Earthworks, Land Arts, and Eco Art (Dr. Warak)

**Readings:**
Cheetham, Mark. *Landscapes into Eco Art: Articulations of Nature Since the ‘60s* (University Park, PA: Penn State University Press, 2018), 1-27.

**Tuesday, October 29**
Topic: Conclude Buckminster Fuller, Earthworks, Land Arts, and Eco Art (Dr. Warak) / Exam Review

**Thursday, October 31**
No regular class. Visit the El Paso Museum of Art to view the exhibitions “Refresh,” “El Paso Museum of Art: 60 Years of Collecting,” and “Leo Villareal: Early Light.” Worksheet due in class Nov. 7 for attendance credit.
Address: 1 Arts Festival Plaza, El Paso, TX 79901 (located downtown at N. Santa Fe and W. Main)

**Tuesday, November 5**
***Exam 2***

**UNIT 3: The Fluid Earth: Sea and Sky**

**Thursday, November 7**
Topic: The Color of the Sky and Learning from Sky Conditions in Painting (Dr. Gill)
Readings:

**November 9-24, Rafael Lozano Hemmer’s Border Tuner project**

**Tuesday, November 12**
Quiz 8
Topic: Art, Space, and the Sky, 1800s to 1950s (Dr. Warak)
Readings:

**Thursday, November 14**
Topic: Using Art to Understand Climate Changes (Dr. Gill)
Readings:


*Encyclopedia of Earth* https://editors.eol.org/eoearth/wiki/Climate_Change


**Tuesday, November 19**

**Quiz 9**

*Topic: Case Studies: Starry Night and The Scream (Dr. Gill)*


**Thursday, November 21**

*Topic: Contemporary Artists Contemplate Space (Dr. Warak)*

*Readings:*


**Tuesday, November 26**

**Quiz 10**

*Topic: Under the Sea: Underwater Images and Seascapes (Dr. Warak)*

*Readings:*


**Tuesday, December 3**

Topic: Artists on Historic and Modern-Day Expeditions to the “Ends of the Earth” (Dr. Gill)

Readings:


**Wednesday, December 4**

Research Projects Due (tentatively)

**Thursday, December 5**

Topic: Course Wrap-up and Exam Review (Dr. Gill and Dr. Warak)

***EXAM 3*** will take place during the course’s designated final exam period, but will not be cumulative: **Tuesday, December 10th at 4:00 - 5:30 p.m.** in our classroom.

**10th at 4:00 - 5:30 p.m.** in our classroom.