

Course Information

Course Number: ANTH 605
Course Title: Conservation of Archaeological Materials I
Time: Tu/Th 2:00-4:30 pm
Location: ANTH 102
Credit Hours: 3

Instructor Details

Instructor: Christopher Dostal
Office: ANTH 102B
E-Mail: dostalc@tamu.edu
Office Hours: Thursday 12:00 pm – 2:00 pm, or by appointment.

Course Description

This course introduces students to the techniques of stabilizing and preserving deteriorated or corroded artifacts from archaeological sites. Proper conservation techniques are introduced in seminar/laboratory sessions designed to familiarize students with the chemicals, equipment, and procedures used in the treatments. Practical experience will be gained in treating organic and siliceous materials, and the various metals commonly found in prehistoric and historic sites. The emphasis will be on the basic conservation processes successfully used on the most commonly encountered artifacts recovered from archaeological sites.

The Conservation Research Laboratory (CRL) is a working laboratory. Therefore, all class and laboratory work is expected to be performed between 2:00 PM and 4:30 PM on Tuesdays and Thursdays. Additional time needed in the lab can be organized with Dr. Dostal or his graduate assistant, Megan Crutcher.

Course Prerequisites

Graduate Classification or Instructor Approval

Textbook and/or Resource Materials

- [*Methods of Conserving Archaeological Material from Underwater Sites*](#) by Donny L. Hamilton
- [*The Elements of Archaeological Conservation*](#) by J.M. Cronyn

Additional readings will be provided as .PDF files by the instructor. Cronyn is reserved for this course at Evans Library and the NAP library.

Grading

Exams (2) – 25% each

Organic Material Conservation Report -20%

Metal Material Conservation Report -20%

Ceramic Restoration Project - 10%

Pop quizzes on readings – up to 5% bonus

Failure to maintain a clean workstation throughout the semester will result in a 5% deduction from your total grade.

Grading Scale

90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

Exams

Each exam is worth 25% of your final grade. The date of the final exam is set by the university. No early exams will be administered.

Exam 1: October 26th

Exam 2: December 15th

Lab Reports

The first report will cover the conservation techniques used for non-metallic materials, and the second report will cover metallic materials. Each report should emphasize the student's own laboratory experiences as well as pertinent observations and comparisons of methods garnered from lectures and readings. For each material conserved, you should address how it deteriorates, treatment options and their respective strengths, and your observations from the lab work. **It is essential that you take prolific notes and photos throughout the semester of everything you do and observe in order to produce an adequate report.** Each report should be succinct, clear, and **very** well-edited. Be sure to cite your sources in-text, with page numbers, and include a bibliography. All figures and tables should be labelled and mentioned in text.

Note – Treated samples **MUST** be included with each report, no exceptions or excuses. A report is not considered submitted until **all** of the associated samples are submitted with it. Late reports will lose a letter grade per day.

All reports **must be printed out** in 12pt Times New Roman font. Reports should follow the formatting guidelines of the OGAPS Thesis manual.

Ceramic Reconstruction

During the semester, each student will decorate, destroy, and reconstruct a terracotta flower pot, which is worth 10% of your grade. The pots will be evaluated on both technical proficiency and the overall finished aesthetic.

Laboratory Policies

- **Be safe** – appropriate PPE must be worn at all time, no exceptions. Failure to comply will result in removal from lab.
- **Be informed** – you cannot reason with a chemical burn or hazardous exposure; you **MUST** be informed on the chemicals and materials you will be using before you use them.
- **Be clean** – A clean lab space minimizes risks to health, safety, and prevents accidental damage to the artifacts. If you use something, clean it and put it back where it belongs when you are done. My assistant can help direct you to where things belong. Your work station should be spotless when you are not actively working.
- **Be organized** – Every procedure you follow should be fully delineated before you begin, and you should then carefully follow that procedure. All materials and containers needed for the procedure must be collected *before* starting any work. All procedures must be approved by me before you begin.

No eating or drinking are allowed in the lab on lab days. Liquids in a closed container are permitted on lecture days. Closed toed-shoes and long pants are mandatory for lab days.

COVID-19 Social Distancing and Safe Practices in Class

To help protect Aggieland and stop the spread of COVID-19, Texas A&M University urges students to be vaccinated and to wear masks in classrooms and all other academic facilities on campus, including labs. Doing so exemplifies the Aggie Core Values of respect, leadership, integrity, and selfless service by putting community concerns above individual preferences. COVID-19 vaccines and masking — regardless of vaccination status — have been shown to be safe and effective at reducing spread to others, infection, hospitalization, and death.

Late Work Policy

Lab Reports and assignments submitted after the deadline will lose a letter grade per day. Note: Work submitted by a student as makeup work for an excused absence is not considered late work and is exempted from the late work policy.

Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to [Student Rule 7](#) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to [Student Rule 7](#) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor" ([Student Rule 7, Section 7.4.1](#)).

"The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence" ([Student Rule 7, Section 7.4.2](#)).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. (See [Student Rule 24](#).)

Academic Integrity Statement and Policy

"An Aggie does not lie, cheat or steal, or tolerate those who do."

"Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, may be sufficient grounds to initiate an academic misconduct case" ([Section 20.1.2.3, Student Rule 20](#)).

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at aggiehonor.tamu.edu.

Americans with Disabilities Act (ADA) Policy

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact the Disability Resources office on your campus (resources listed below) Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

Disability Resources is located in the Student Services Building or at (979) 845-1637 or visit disability.tamu.edu.

Title IX and Statement on Limits to Confidentiality

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is handled, including whether or not to pursue a formal investigation. The University's goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with [Counseling and Psychological Services \(CAPS\)](#).

Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University's [Title IX webpage](#).

Statement on Mental Health and Wellness

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student's academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing available resources and services on campus.

Students who need someone to talk to can contact Counseling & Psychological Services (CAPS) or call the TAMU Helpline (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the National Suicide Prevention Hotline (800-273-8255) or at suicidepreventionlifeline.org.

Anthropology Department Statement on Diversity

Respect for cultural and human biological diversity are core concepts of Anthropology. In this course, each voice in the classroom has something of value to contribute to class discussion. Please respect the different experiences, beliefs and values expressed by your fellow students and instructor, and refrain from derogatory comments about other individuals, cultures, groups, or viewpoints. The Anthropology Department supports the Texas A&M University commitment to Diversity, and welcomes individuals of all ages, backgrounds, citizenships, disabilities, education, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experience, political views, races, religions, sexual orientations, socioeconomic statuses, and work experiences (See <http://diversity.tamu.edu/>).



The hull of *La Belle* (1686CE) being soaked in polyethylene glycol (PEG) at the CRL in 2012

Course Schedule

Week 1

August 31st
September 2nd

Introduction, CRL History, campus lab tour, safety overview
CRL @ Rellis Tour

Friday September 3rd – Last day to add/drop courses for the semester

Week 2

September 7th

2:00-2:30 – Guest Speaker Stephen Bales from Evans Library
Adhesives & Consolidants lecture

Readings:

- Ashley-Smith, J. et al. (1992) Science for Conservators Vol. 3: Adhesives and Coatings. P. 49-56; 57-89. Routledge Publishing, London.
- Hamilton, D. (1999) Methods of Conserving Archaeological Material from Underwater Sites. P. 11- 14

September 9th

Adhesives & Consolidants Lab

Week 3

September 14th

Bone & Ivory

Readings:

- Hamilton, D. (1999) Methods of Conserving Archaeological Material from Underwater Sites. P. 15-16
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 238-245; 275-282. Routledge Publishing, London.

September 16th

Bone & Ivory Lab

Week 4

September 21st

Wood

Readings:

- Hamilton, D. (1999) Methods of Conserving Archaeological Material from Underwater Sites. P. 22-29
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 246-263. Routledge Publishing, London

September 23rd

Wood Lab

Week 5

September 28th

Wood (con't)

Readings:

- Historic England (2010) [Waterlogged Wood: Guidelines on the Recording, Sampling, Conservation, and Curation of Waterlogged Wood.](#)
- McCawley, J. (1977) [Waterlogged Artifacts: The Challenge to Conservation.](#) *Journal of the Canadian Conservation Institute.* Vol. 2 pp 17-26.

September 30th

Wood Lab II

Week 6

October 5th

Leather

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites.](#) P. 30-33
- Cronyn, J. (1990). [Elements of Archaeological Conservation.](#) P. 263-274. Routledge Publishing, London

October 7th

Leather Lab

Week 7

October 12th

Textiles, Rope, & Misc Organics

Guest Lecture: Jeanne Goodman

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites.](#) P. 30-33
- Cronyn, J. (1990). [Elements of Archaeological Conservation.](#) P. 248-295. Routledge Publishing, London

October 14th

Textiles, Rope, & Misc Organics Lab

Week 8

October 19th

Glass, Pottery, & Stone

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites.](#) P. 38-48

- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 160-176. Routledge Publishing, London

October 21st Lab / Exam review

Week 9

October 26th **Exam 1 – Non Metal Artifacts (REPORT 1 DUE)**

October 28th Introduction to Metals

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites](#). P. 38-48
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 160-176. Routledge Publishing, London

Week 10

November 2nd Iron & Electrolytic Cleaning

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites](#). P. 49-72
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 176-202. Routledge Publishing, London

November 4th Iron Lab

Week 11

November 9th Copper, Brass, Bronze

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites](#). P. 73-77
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 213-230. Routledge Publishing, London
- Keith, D. et al. (1997). [A Bronze Cannon from La Belle: Its Construction, Conservation, and Display](#). IJNA Vol. 26 No. 2. Pp. 144-158
- Weisser, T. (1987). [The use of sodium carbonate as a pre-treatment for difficult-to-stabilize bronzes](#). In *Recent advances in the conservation and analysis of artifacts*. London: Summer Schools Press. 105–8

November 11th Copper, Brass, Bronze Lab

Week 12

November 16th Lead, Tin, Pewter

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites](#). P. 85-87
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 201-213. Routledge Publishing, London

November 18th Lead, Tin, Pewter Lab

Week 13

November 23rd Silver, Gold, Composite Artifacts

Readings:

- Hamilton, D. (1999) [Methods of Conserving Archaeological Material from Underwater Sites](#). P. 78-84, 88
- Cronyn, J. (1990). Elements of Archaeological Conservation. P. 230-237. Routledge Publishing, London
- Scott, D. (1983) [The Deterioration of Gold Alloys and Some Aspects of Their Conservation](#). *Studies in Conservation* Vol. 28 No. 4. Pp 194-203.
- MacLeod, I and North, N. (1979) [Conservation of Corroded Silver](#). *Studies in Conservation* Vol. 24 No. 4. Pp 165-170.
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November 25th-26th Thanksgiving Holiday



Week 14

November 30th Modern Metals

December 2nd Project wrap-ups

Week 15 – Final Week of Classes

December 7th Redefined Day – Students attend Thursday Classes
 Lab Cleanup & Exam Review. Note: Exam review begins *after* lab is clean.

Report 2 Due, Ceramic Reconstruction Due

December 9th Reading Day, No Classes*

***Final Examination**
December 15th 1:00-3:00pm