

# Underwater Archaeology

Tuesday/Thursday  
2:00 – 3:20 PM  
25 University Hall

**Professor:** Dr. Ashley K. Lemke

**Email:** [ashley.lemke@uta.edu](mailto:ashley.lemke@uta.edu)

**Office:** 422 University Hall

**Laboratory:** 19 University Hall

**Office Hours:** Wednesdays 1-2PM, or by appointment (please email)



## Course Description

Archaeologists learn about past societies by examining the material they leave behind. These materials can include anything affected by human behavior — from small disturbances in the soil to architectural remains, from sacred objects to the mundane refuse of daily life. In some cases this material adds to what we know from historical accounts, but most often, **archaeology gives us a picture of the past that we would never otherwise see**. Underwater sites offer some of the best preserved but most challenging archaeological contexts to research. This course will introduce students to archaeology underwater, including methods, research questions, great discoveries, and the history of investigation. It will cover vast stretches of time and space, from historic shipwrecks in the Mediterranean to >10,000 year old prehistoric sites in North and South America. Underwater archaeology is an emerging field in anthropology more generally – and this course will explore its important role in the future of archaeology.

**Course Organization and Requirements**

**Participation & In-Class Exercises: 20%**

Over the course of the semester, there will be several in-class exercises. These exercises are used to reinforce concepts discussed in lecture and readings, and to give students a more practical experience of archaeological issues. These exercises will be equally weighted. These activities cannot be made up later for credit if a class is missed, however, up to **two** missed exercises will be excused without penalty. Any more missed exercises will have a negative effect on the grade.

**Attendance Policy:** There is no separate attendance grade for this class, but these exercises require class attendance (see below)

**Short Papers: 30%**

Two short papers (2 – 4 double spaced pages each) will allow you to apply your creativity to further explore the archaeological experience and interpretation of the past.

**Midterm Exam: 25%**

The midterm examination will cover the reading, lecture, and discussion of the first half of the course. This and the final will be mixed format (multiple choice, fill-in the blank, and short essay).

**Final Exam: 25%**

The final exam will be cumulative, with an emphasis on the latter half of the course.

**Grading Scale:** Your total course grade will be determined based on the following scale:

90% and higher	A
80 to 89%	B
70 to 79%	C
60 to 69%	D
Less than 60 %	F

0.5% is round to the next higher grade

**Grade Grievances:** Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog. See, <http://catalog.uta.edu/academicregulations/grades/#undergraduatetext>

**Class Schedule (may be amended)**

<b>Day</b>	<b>Topic</b>	<b>Readings/Assignments</b>
<b>24 Aug</b>	Introduction to the course	
<b>29 Aug</b>	Introduction to Archaeology	
<b>31 Aug</b>	Why are some archaeological sites underwater?	Bass 1966
<b>5 Sept</b>	History of Underwater Research Part 1	Broadwater 2002
<b>7 Sept</b>	""	
<b>12 Sept</b>	History of Underwater Research Part 2	Gibbs 2006
<b>14 Sept</b>	""	
<b>19 Sept</b>	Underwater Archaeological Methods: Survey	Institute for Marine Acoustics SSS Primer (website); Green 2004
<b>21 Sept</b>	""	<b>First Short Paper Due</b>
<b>26 Sept</b>	Underwater Archaeological Methods: Mapping	
<b>28 Sept</b>	Underwater Archaeological Methods: Testing and Excavation	Cavers and Henderson 2005; O'Shea et al. 2014
<b>3 Oct</b>	""	
<b>5 Oct</b>	<b>Midterm</b>	
<b>10 Oct</b>	Historical and Nautical Archaeology	Muckelroy 1979 Ch. 1; Gould 2012, Chs. 1 & 2
<b>12 Oct</b>	""	<b>Finish Hemingway 1952</b>
<b>17 Oct</b>	Shipwrecks in the Mediterranean	Bass 2006; Greenhill 1988
<b>19 Oct</b>	""	
<b>24 Oct</b>	""	
<b>26 Oct</b>	Shipwrecks in the Great Lakes	O'Shea 2002
<b>31 Oct</b>	""	O'Shea 2004
<b>2 Nov</b>	""	
<b>7 Nov</b>	Submerged Prehistoric Archaeology	

<b>9 Nov</b>	<b>Edmund Fitzgerald Day</b>	<b>Second Short Paper Due</b>
<b>14 Nov</b>	Mesolithic Europe	Gaffney et al. 2007; Fischer 1995 Ch. 1
<b>16 Nov</b>	""	
<b>21 Nov</b>	North America	Flatman and Evans 2014
<b>23 Nov</b>	<b>THANKSGIVING HOLIDAYS CLASS DOES NOT MEET</b>	
<b>28 Nov</b>	Global Prehistory Underwater	Carabias et al. 2014
<b>30 Nov</b>	Course Summary	
<b>5 Dec</b>	<b>SONAR WORKSHOP CLASS DOES NOT MEET</b>	<b>Study for Final Exam</b>
<b>12 Dec</b>	<b>Final Exam, 2 - 4:30</b>	

**Required Readings**

There is only one required textbook for this course: *The Old Man and the Sea*, by Ernest Hemingway.

*All other readings will be made available electronically. While not core archaeology textbook is required, the volumes by Gould, Green, and Bowens are particularly important and student with a serious interest in the topic may wish to purchase one or more of them.*

Bass, G. C.  
1966 *Archaeology Underwater*, Frederick A. Praeger Publishers.

2006 New Techniques for Archaeology and Greek Shipwrecks of the Sixth and Fifth Centuries BC, *Proc. of the American Philosophical Society* 150(1):1-14.

Broadwater, J.  
2002 Timelines of Underwater Archaeology, in *International Handbook of Underwater Archaeology*, Ruppé, C. V., and J. E. Barstad (Eds), Plenum, pp. 17-26.

Bowens, A.  
2009 *Underwater Archaeology: The NAS Guide to Principals and Practice*, 2nd Edition

Carabias et al.  
2014 Submerged Paleolandscapes: Site GNL Quintero I (GNLQ1) and the First Evidences from the Pacific Coast of South America, in *Prehistoric Archaeology on the Continental Shelf: A Global Review*, Evans, A.M., Flatman, J. C., and N. C. Flemming (Eds), Springer, pp. 131-150.

Cavers, M. G. and J. G. Henderson

2005 Underwater Excavation of Ederline Crannog, Loch Awe, Argyll, Scotland, *International Journal of Nautical Archaeology* 34(2):282-298. .

Gaffney, V., Thomson, K., and S. Fitch

2007 Mapping Doggerland: The Mesolithic Landscapes of the Southern North Sea, Introduction and Figures throughout

Gibbs, M.

2006 Cultural Site Formation processes in Maritime Archaeology: Disaster, Response, Salvage and Muckleroy 30 Years on, *International Journal of Nautical Archaeology* 35(1):4-19.

Gould, R.

2012 *The Archaeology and Social History of Ships*, Chapter 1 Interpreting the Underwater Archaeological Record, pp. 7-20.

2012 *The Archaeology and Social History of Ships*, Chapter 2 Underwater Archaeology: the State of the Art, pp. 21-64.

Green, J.

2004 *Maritime Archaeology: A Technical Handbook*, Chapter 4, Conventional Survey, pp. 51-87.

Greenhill, B.

1988 *The Evolution of the Wooden Ship*, Blackburn Press.

Fischer, A.

1995 *Man and Sea in the Mesolithic*, Oxbow Books.

Flatman, J. C., and A. M. Evans

2014 Prehistoric Archaeology on the Continental Shelf: The State of the Science in 2013, in *Prehistoric Archaeology on the Continental Shelf: A Global Review*, Evans, A.M., Flatman, J. C., and N. C. Flemming (Eds), Springer, pp. 1-12.

Institute for Marine Acoustics SSS Primer

[www.instituteformarineacoustics.org/SonarPrimer/SideScanSonar.htm](http://www.instituteformarineacoustics.org/SonarPrimer/SideScanSonar.htm)

Muckelroy, K.

1979 *Maritime Archaeology*, Cambridge University Press.

O'Shea, J. M.

2004 The Identification of Shipwreck Sites: A Bayesian Approach, *Journal of Archaeological Science*, 31:1533-1552.

2002 The Archaeology of Scatter Wreck-Sites: Formation Processes and Shallow Water

Archaeology in Western Lake Huron, *International Journal of Nautical Archaeology*, 31(2):211-227.

O'Shea et al.

2014 A 9,000-year-old Caribou Hunting Structure beneath Lake Huron, *Proc. of the National Academy of Sciences* 111(19):6911-6915.

## Course Policies and Useful Information

**Academic Integrity:** As a student of the University of Texas at Arlington, you are expected to maintain the highest standards of academic integrity. Any instance of academic dishonesty will have a significant negative impact on your scholastic record, and your grade in this course. Discipline may include a failing grade for the class together with either suspension or expulsion from the university. Any and all academic misconduct will be reported to the Office of Student Conduct. This course has a zero tolerance policy for cheating or plagiarism.

The Board of Regents has defined academic dishonesty as follows: "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." (Regents' Rules and Regulations, Series 50101, Section 2.2). All students enrolled in this course are expected to adhere to the **UT Arlington Honor Code:**

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

**Late Work:** Assignments are graded down **10%** of their value per day after the due date.

**Make-Up Tests:** **There are no make-up tests.** If a serious illness, emergency situation, jury duty, or military service obligation arises that prevents you from attending the midterm or the final, contact me immediately. Lying about such an emergency will be considered academic dishonesty, and will result in a failing grade.

**Attendance:** Although there is no attendance grade, missing in-class assignments will negatively impact your grade (as described above). Some assignments or exercises may happen at the beginning of the class. If you miss these activities by arriving late, **you will not be able to make them up.**

**Drop Policy:** **The last day to drop classes is November 1, 2017. Submit your request to your advisor prior to 4pm.** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes

or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

**Disability Accommodations: Contact me early in the semester.** UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of **a letter certified** by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

**The Office for Students with Disabilities, (OSD)** [www.uta.edu/disability](http://www.uta.edu/disability) or calling 817-272-3364. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability).

**Counseling and Psychological Services, (CAPS)** [www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

**The IDEAS Center** (2<sup>nd</sup> Floor of Central Library) offers **free** tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email [IDEAS@uta.edu](mailto:IDEAS@uta.edu) or call (817) 272-6593.

**The English Writing Center (411LIBR):** The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at <http://uta.mywconline.com>. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information on all our programs and services.

The Library’s 2<sup>nd</sup> floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library’s hours of operation.  
<http://library.uta.edu/academic-plaza>

**Non-Discrimination Policy:** *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit [uta.edu/eos](http://uta.edu/eos).*

**Title IX Policy:** The University of Texas at Arlington (“University”) is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or [jmhood@uta.edu](mailto:jmhood@uta.edu).*

**Student Feedback Survey:** : At the end of each term, students enrolled in face-to-face and online classes categorized as “lecture,” “seminar,” or “laboratory” are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback via the SFS database is aggregated with that of other students enrolled in the course. Students’ anonymity will be protected to the extent that the law allows. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Campus Carry:** Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells.

<p><b>Emergency Phone Numbers:</b> In case of an on-campus emergency, call the UT Arlington Police Department at <b>817-272-3003</b> (non-campus phone), <b>2-3003</b> (campus phone). You may also dial 911. Non-emergency number 817-272-3381 <b>Subscribe to MavAlert!</b> MavAlert will send information in case of an emergency to your cell phone or email. <a href="https://mavalert.uta.edu/">https://mavalert.uta.edu/</a></p>
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