

ZOOARCHAEOLOGY ONLINE
ANTH 4460 – 001/002 & BIOL 4460 – 001/002
Spring, 2020

INSTRUCTOR: Dr. Naomi Cleghorn

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Canvas Office Hours: Tuesday/Thursday, 2 pm – 4:30 pm, or by appointment

CLASS MEETS: Tuesday & Thursday, 11 – 1 pm Online

COURSE DESCRIPTION:

Zooarchaeology is the study of animal remains (primarily bones, teeth, and shells) from archaeological contexts. The goal of most zooarchaeological studies is to determine how animals fit into human economic and ecological strategies. Zooarchaeological research is therefore applicable in virtually all archaeological contexts (as long as animal remains are preserved) and is an integral component of archaeological analysis.



This course introduces students to the important issues and analytical techniques of zooarchaeology, including taphonomic processes (that is, how faunal assemblages are formed and altered), quantification of skeletal elements, distinctions between major taxonomic groups, season of death, interpretation of mortality profiles, application of optimal foraging theory, and biometric data analysis. Laboratory sessions complement lectures and provide hands-on instruction in skeletal identification. Students learn how to identify bones and teeth, how to distinguish between some major taxonomic groups, and how to identify evidence of bone alteration by various taphonomic processes (i.e., butchery, burning, acid dissolution, weathering, and carnivore gnawing). Using modern bone, students work in small groups to

simulate and then analyze some of these processes. We also discuss field and laboratory methods, including documentation and conservation.

Because zooarchaeological analysis requires the use of a computer, some lab time may be devoted to the use of software applications. Students will learn the basics of using a spreadsheet and a database program. (Note: these are basic life skills, and will help you get a job in virtually any field after college!)

STUDENT LEARNING OUTCOMES:

By the end of the course students should be able to do the following:

- Summarize the major issues in zooarchaeological analysis, including taphonomic processes, methodology, and interpretation.
- Identify skeletal elements, including fragmented bones, from a variety of animals.
- Identify teeth and some bones to taxon.
- Produce basic quantification summaries.
- Identify evidence on animal bones for various taphonomic processes.

Other skills students should acquire:

- Use of a spreadsheet program (Excel) for data analysis and graphing.

REQUIRED TEXTS:

Reitz EJ, and Wing ES. 2008. *Zooarchaeology*. Cambridge University Press.

Additional required readings listed on the class schedule. Links to these readings can be found on Canvas. Multiple osteological guides will be provided in lab and via Blackboard.

SUGGESTED TEXTS

(Helpful guides and advanced textbooks, for those who want to push their knowledge farther. These are all available in the lab.):

- Elbroch, M. 2006. *Animal Skulls: A guide to North American Species*. Stackpole Books.
(Regional, but very helpful for detailed anatomical differences)
- Gifford-Gonzalez, D. 2018. *An Introduction to Zooarchaeology*.
(A graduate level textbook, newly published, a comprehensive update to Lyman – listed below)
- Hillson S. 2005. *Teeth*. Cambridge University Press.
(Everything you could possibly want to know about teeth. Definitive and comprehensive. Super helpful to have in the lab)
- Lyman, R.L. 1994. *Vertebrate Taphonomy*. Cambridge University Press.
(A graduate level textbook that has been a standard “bible” for taphonomic zooarchaeologists for the past 20 years)
- Russell, N. 2011. *Social Zooarchaeology*. Cambridge University Press
(A different, more social perspective on zooarchaeological interpretation.)

REQUIREMENTS & GRADING:

Students are evaluated on the basis of quizzes, laboratory reports, two exams (a midterm and final).

Requirement	% of Grade
Labs	30%
Quizzes	30%
Zooarchaeology Literature Method Analysis	25%
Final exam	15%

LABS: (30%)

All lab assignments should be completed. Students must use the assigned lab time to complete these exercises. Organized management of data during collection and analysis is essential to any laboratory science, including archaeology.

QUIZZES (30%)

There will be several quizzes over the course of the semester. These will primarily focus on practical skills, but may also include material covered in readings or lecture. The 2 lowest quiz grades will be dropped automatically.

ZOOARCHAEOLOGY LITERATURE METHOD ANALYSIS (25%):

Students will undertake an abbreviated literature research (using at least 2 peer-reviewed articles) on a subject that incorporates zooarchaeological evidence, write a short (1000 – 2500 word) paper on the topic, and (for extra credit) produce a short (5 - 10 slide) powerpoint presentation on the topic for their peers.

The choice of topic is left to the student, but could include, for example, issues of domestication and domestic origin, hunter-gatherer resource acquisition, extinction and human interactions with animals, early hominin acquisition of faunal resources, faunal evidence for environmental change, faunal evidence for economic strategy, and comparative methodological approaches to faunal analysis.

The research process is as important as the paper, and thus this requirement will be broken down into several different graded portions as follows: (100 pts total)

Initial reading and topic selection: 5 pts

- Evidence for exploratory reading in the addition of two zooarchaeology studies to the GoogleEarth project described at the beginning of the semester. (2pts, **due March 28**)
- A written statement of the topic to be researched. (3 pts, **due March 31**)

Create a Reference Manager Collection using Zotero: 10 pts due April 3rd

- Download the Zotero application and Word plug-in
- Create a file within your Zotero library named Zooarchaeology Class
- Add at least 3 references to this library (they should be zooarchaeology references, but they don't have to be the ones you will use in your paper – this is just an exercise in adding references)
- Take a screen shot of your Zotero library, showing these references, and submit this via the link on Canvas.

Annotated Research Bibliography with a minimum of 3 scholarly references: 30 pts due April 16th

- References must be pre-approved (check with me to verify that they are appropriate). They must be peer reviewed articles or scholarly texts published by an academic publisher.
- Bibliography *must* be created with Zotero (this will be covered in a lab), and properly formatted (authors in alphabetical order, citations in APA format).
- Annotation must include a short summary of the paper in your own words and an explanation of how it will be used in your paper.
- The (minimum) 3 references used in this annotated bibliography must be new to the course. They can not be a reference I have assigned to you.
- When writing your paper, you should also cite references from the course (and include those in your references cited section), but these won't be part of the annotated bibliography.

Detailed Outline of Research Paper: 5 pts, due April 24th

Outline should include detailed information, including specific information and references used.

Research Paper: 50 pts due May 7th

- Paper must be 1000 – 2500 words in length (not including references cited section).
- Must include a References Cited section, properly formatted and created with Zotero.
- Must use in-text citation properly (using Zotero).

I am looking for a paper that clearly articulates a topic, introduces and analyzes at least 2 key references from your annotated bibliography (you can use more, these should be on the same topic, so you can discuss them in a comparative way), thoughtfully discuss the methodologies used and / or the types of data presented.

The paper will also be graded for clarity of writing, grammar, and format. I will provide a rubric further explaining this. About 70% of the paper grade is based on content, 30% on style and execution.

Extra Credit - Presentation: 10 pts due May 7th

- Create a power point presentation of 5 to 10 slides, explaining your topic, your research papers, and the methods and data used in those papers.
- Your slides should have an Introduction, and logical progression, and a conclusion
- Record your slideshow with Studio (on your Canvas site – left side).

FINAL EXAM (15%):

The exam will be essay format. It will be comprehensive.

GRADING SCALE:

Grades for assignments and tests are posted to Canvas as soon as possible. It is your responsibility to track your progress and determine that grades have been entered correctly to Canvas. If you find a discrepancy, contact me immediately.

Your total course grade will be determined based on the following scale.

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

* A .5% is rounded to next higher grade.

TEST AND ASSIGNMENT DUE DATES:

SCHEDULED QUIZZES/EXAMS/ASSIGNMENTS	DATE (Subject to revision)
Quiz 1: Reading / Lecture Material	January 30 th
Quiz 2: Bovid / Cervid whole bones - practical	February 6 th
Quiz 3: Landmarks on whole bones - practical	February 13 th
Quiz 4: Comparative cranial and dental anatomy	February 20 th
Quiz 5: Identification of fragmentary remains	February 27 th
Quiz 6: Fracture Assessment	March 5 th
Spring Break – no quiz	March 12 th
Spring Break extended	March 19 th
Lab 7: Quantification	March 24 th
Quiz 7: Quantification	March 27 th
GoogleEarth – 2 studies	March 28 th
Lab 8: Surface modification	March 31 st
Topic statement	March 31 st
Create Reference Manager Collection in Zotero	April 3 rd
Lab 9: Diet Breadth	April 14 th
Annotated Bibliography	April 16 th
Lab 10: Opovo Skeletal Element Representation	April 21 st
Paper Outline	April 24 th
Research Paper & Extra Credit Presentation	May 7 th

Final Exam	Tuesday May 12 th , 11am – 1:30 pm
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CLASS SCHEDULE: WHAT TO DO AND WHEN TO DO IT

(Subject to revision)

Reading abbreviations: RW = Reitz & Wing textbook, all others on Canvas

Week	Dates	Topic	Lab	Quiz /Assign.	Reading
1	Jan 21 st / 23 rd	Introduction to zooarchaeology	Body plan: Whole bone Bovid and Canid	None	RW 1 & 2 (30 pages)
2	Jan 28 th / 30 th	Basic biology & vertebrate skeletons	Skeletal element landmarks	Reading / Lecture Quiz	Davis 2 (13 pages) RW 3: pp 31-46, 56 – 60 (19 pages)
3	Feb 4 th / 6 th	Comparative Osteology & Dentition	Vertebrate comparisons, skulls	Whole bone	RW 3 pp 46-56 Hillson pp 1 – 18 Elbroch pp 9 – 39, 41 - 63
4	Feb 11 th / 13 th	Taphonomy & Zooarchaeological Assemblages	Identification of fragmented bones (Introduction to Opovo)	Bone landmarks	RW 5 Brain 1981 Intro Lyman Chap. 1, pages 1-8
5	Feb 18 th / 20 th	Fragmentation, burning, weathering	Fracture morphology & weathering	Comparative crania & dentition	Behrensmeyer 1978 Villa & Mahieu 1991 Lyman pp315-338
6	Feb 25 th / 27 th	Quantification	Bone fragment Identification	Fracture Assessment	RW 7 pp213-242 Lyman pp97–113
7	Mar 3 rd / 5 th	Surface modification I: Non-human	Quantification		RW 5 (review) pp126 – 139. Lyman ch 8 pp303 – 315
8	Mar 10 th / 12 th	SPRING BREAK I	--	--	--
9	Mar 17 th / 19 th	SPRING BREAK II			
10	Mar 24 th / 26 th	Surface modification II: butchery	Surface modification	Quantification concepts	Binford 1981: 105 - 148 Blumenschine 1995
11	Mar 31 st / Apr 2 nd	Mortality, Seasonality	Using Zotero		RW 3 pp 63-80 Davis 4 Lyman pp 114-135
12	Apr 7 th / 9 th	Prey choice and Optimal Foraging Theory	Diet Breadth choices		Bettinger 2009, Chap 1 RW 8
13	Apr 14 th / 16 th	Body part representation: Utility, Density, Transport, & Attrition	Opovo representation lab		Lyman 223-234 Marean/Cleghorn 2003

14	Apr 21 st / 23 rd	Domestication			RW 9; NR 6 Zeder 2006
15	Apr 28 th / 30 th	Village & Urban Zooarchaeology			Crabtree 1990 O'Connor 14
16	May 5 th / 7 th	Environmental Zooarchaeology			RW 4 & 10 Lyman 2006

COURSE POLICIES

(including the policies of the Vice Provost for Academic Affairs):

Institution Information

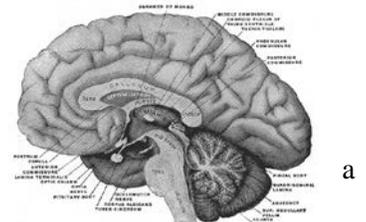
UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the [Institutional Information](http://www.uta.edu/provost/administrative-forms/course-syllabus/index.php) page (<http://www.uta.edu/provost/administrative-forms/course-syllabus/index.php>) which includes the following policies among others:

- Drop Policy
- Disability Accommodations
- Title IX Policy
- Academic Integrity
- Student Feedback Survey
- Final Exam Schedule

1. ACADEMIC INTEGRITY POLICY:

Make sure all your work is the product of *YOUR BRAIN!*

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 significant negative impact on your scholastic record, not to mention your grade in this class.



Discipline may include a failing grade for the class together with either suspension or expulsion from the University of Texas. Also, academic misconduct will be reported to the Office of Student Conduct.

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.

From the Provost: “UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents’ Rule 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.”

2. LATE WORK POLICY:

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

3. MAKE-UP TEST POLICY:

--There are no make-up tests or quizzes! --

The nature of practical quizzes makes them very difficult to set up and run, so I do not offer make-ups. However, I do automatically drop the two lowest grades. Thus, you can miss two quizzes with impunity. Save these misses for emergency use.

One of the arguments I hear sometimes is: “I have a *serious* emergency and need to miss a quiz, and all the other students who don’t have a real emergency get to use the drops to their advantage to raise their grade, so I need an additional dropped grade/make-up just to be even.” Please do not make this argument to me. No one gains an advantage here, and I will absolutely not make comparisons between students regarding the level of their disadvantage. You may have to work harder to make up for missed classes/quizzes.

4. ATTENDANCE POLICY:

Be there on time! Yes – I take attendance.

Attendance *and punctuality* are expected and monitored (see above). Walking in late is rude and distracting – don’t do it! Students will be marked as absent if they enter the classroom after lecture has begun, or use a cell phone or any electronic communication device during class. If you leave early, I will also note this – unless you clear it with me first.

The Provost’s Office would like me to add: “: At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients “begin attendance in a course.” UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Canvas. This date is reported to the Department of Education for federal financial aid recipients.”

5. ELECTRONIC COMMUNICATION POLICY:

I expect you to check your UTA email daily during the week!

A note from the Provost on 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>.”

To obtain your NetID or for logon assistance, visit: <https://webapps.uta.edu/oit/selfservice/>.

If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

6. CANVAS POLICY:

I use Canvas for this course. Check it often for assignments, instructions, announcements, and to monitor your progress.

7. CLASSROOM ELECTRONIC DEVICE POLICY:



From my perspective, when I lecture I am in a conversation with you. Granted, I tend to do much of the talking, but it's a conversation, nevertheless. When you start texting in the middle of lecture, it's exactly as if you were texting in the middle of a one-on-one conversation with me – which is both rude and really distracting. So don't even have your cell phone out in class. If you need to leave it on vibrate for emergency calls, discuss this with me before class.

I also do not allow laptops in lecture – *unless* you have a special waiver from the Office for Students with Disabilities. During labs, you may use a tablet or laptop to reference digital anatomical sources or to take notes, and you may use your phone to take photos (although generally, this isn't a good use of time). You may not use lab time to check email, facebook, text, etc. This is a waste of the time you paid for.

8. NON-DISCRIMINATION & TITLE IX POLICY:

As stated by the Provost's Office:

“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.”

“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 or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or jmhood@uta.edu.”

9. DROP POLICY:

The last day to drop a class is April 3rd, by 4 pm.

The Provost's Office states:

“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 (**Late Registration Ends January 24th**). 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/>).”

10. AMERICANS WITH DISABILITIES ACT POLICY:

Contact me early in the semester if you need special accommodation.

All tests taken in the ARC need to be scheduled well in advance.

Note: This class format includes timed station quizzes. If you need special accommodation, we will need to work this out at the beginning of the semester as these quizzes must be taken in room 468.

Please inform me if you have a disability requiring special consideration for classes and exams, and provide me with the relevant paperwork during the first two weeks of class. If you need to take any tests or exams in the Office for Students with Disabilities (UH 102), please note that these must be scheduled with both the instructor and that office at least a week in advance. It is possible (and preferable) to set up this schedule near the beginning of the semester.

The University’s policy as stated by the Provost is as follows:

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 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.

Counseling and Psychological Services (CAPS) 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.

11. STUDENT FEEDBACK SURVEY

Please fill out the feedback survey!!

The Provost adds: “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>.”

12. FINAL REVIEW WEEK POLICY

As stated by the Provost's Office: "for semester-long courses, a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate."

13. EMERGENCY EXIT PROCEDURES:

Know your exit routes! To reach the nearest stairwell, exit the room, turn right, go straight past the elevators, and turn left. Alternatively, there is another stairwell on the east end of the building (exit the room, turn left, continue to the end of the hall, turn right). When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist mobility-impaired individuals.

14. CAMPUS CARRY: From the Provost: "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/>"

COURSE SUPPORT SERVICES (Get Help – Get a better grade!)



OFFICE HOURS

Come see me if you're having trouble with the class. If you can't come to my office hours, me to make an appointment.

email

TUTORING

The IDEAS Center (2nd 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 or call (817) 272-6593.

STUDENT SUPPORT SERVICES AVAILABLE:

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, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

LIBRARY INFORMATION

Research or General Library Help

Ask for Help

- Academic Plaza Consultation Services (library.uta.edu/academic-plaza)
- Ask Us (ask.uta.edu/)
- Research Coaches (<http://libguides.uta.edu/researchcoach>)

Resources

- Library Tutorials (library.uta.edu/how-to)
- Subject and Course Research Guides (libguides.uta.edu)
- Librarians by Subject (library.uta.edu/subject-librarians)
- A to Z List of Library Databases (libguides.uta.edu/az.php)
- Course Reserves (https://uta.summon.serialssolutions.com/#!/course_reserves)

- Study Room Reservations (openroom.uta.edu/)