TEXAS
The University of Texas at Austin

INF 392K - Digital Archiving and Preservation

#28550 | Spring 2023

CLASS MEETS: Wednesdays, 6-9pm, UTA 1.210A

Instructor: Brenna Edwards | Pronouns: she/her
Office: Harry Ransom Center | Office hours: By appointment
Email: brenna.edwards@austin.utexas.edu | Phone: please email

Course Description

UNIVERSITY CATALOG COURSE DESCRIPTION

Examines the permanent archiving of digital information. Covers media refreshment, emulation, migration, and electronic records repository construction and administration. Case study projects involving campus repositories and off-campus institutions. Students use legacy hardware and software and digital forensics tools to preprocess digital collections for repository storage. Also explores issues in long-term electronic records preservation.

LEARNING OUTCOMES

By the end of this course:

- Students will be able to identify the key components that make up a digital repository program
- Students will be able to identify the digital preservation needs and practical repository goals based on the type of institution
- Students will be able to determine the best tactics to preserve file formats for long-term sustainability
- Students will be able to complete an electronic records transfer from a transferor while guaranteeing its authenticity
- Students will be able to discuss varying kinds of metadata and its practical application to digital preservation and access
- Students will be able to review situations to determine whether emulation is the best tactic for preserving content and/or providing access
- Students will be able to invoke command-line tools successfully

- Students will be able to preserve a website
- Students will be able to identify resources and independently learn how to solve complex digital preservation problems not covered in this course

How Will You Learn?

STATEMENT OF LEARNING SUCCESS

Your success in this class is important to me. We all learn differently, and everyone struggles sometimes. You are not, ever, the only one having difficulty! If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we will develop strategies to meet both your needs and the requirements of the course. I also encourage you to reach out to the student resources available through UT and I am happy to connect you with a person or Center if you would like.

TEACHING MODALITY INFORMATION

Students will learn through a combination of course readings, class discussions, and experimentation, both in person and through Canvas. This course is intended to be mostly in-person, requiring in-person attendance. If in-person attendance is not possible for the class as a whole, teaching will occur online until such time as it is possible to resume in-person sessions (excluding university-wide shutdowns). Students in situations making in-person attendance not feasible for them while the class as a whole is able to meet can discuss alternative options, such online discussion through Zoom or other technologies. Some sessions will be asynchronous, and have been noted in advance in the syllabus. These sessions will be conducted entirely in Canvas and participation is required.

COMMUNICATION

The course Canvas site can be found at utexas.instructure.com. Please email me through Canvas. You are responsible for ensuring that the primary email address you have recorded with the university is the one you will check for course communications because that is the email address that Canvas uses.

ASKING FOR HELP

If you need to meet in-person, office hours are by appointment as my primary location is off-campus. You can email me at any time with your questions and I will do my best to answer

your questions in a timely manner. If email is not sufficient, we can arrange for a teleconference discussion as an alternative.

DIVERSITY, EQUITY AND INCLUSION

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed, and that the diversity that students bring to this class can be comfortably expressed and be viewed as a resource, strength and benefit to all students. Please come to me at any time with any concerns.

DISABILITY & ACCESS (D&A)

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Disability & Access (D&A). Please refer to the D&A website for more information: http://diversity.utexas.edu/disability/. If you are already registered with D&A, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Course Requirements and Grading

REQUIRED MATERIALS

Readings will be assigned each week and available online

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REQUIRED DEVICES

Laptop with access to internet

CLASSROOM EXPECTATIONS

Class attendance and participation is expected and is part of your grade. As a field, digital preservation grows through discussion among practitioners on how they have dealt with real-world scenarios. Learners will struggle with some material (at least I did when I was learning) and talking through the materials and its underlying concepts allow both you and your classmates to gain better insight into the issues. Students will abide by the code of conduct created during the first week of class in these discussions. In light of recent circumstances, if reasonable in-person attendance is not possible for an individual or the class as a whole, online discussion and lecture tools may be used. Individuals facing these issues should talk with me about how best to approach the problem.

ASSIGNMENTS

The following table represents how you will demonstrate your learning and how we will assess the degree to which you have done so.

Assignments	Points Possible	Percent of Total Grade
1. Participation/Discussion – • Did you attend class? • Did you participate in discussion of the topics of the day? • Did you grapple with what we attempted to do in class (i.e. figure out how to use a tool, create a tool, experiment with a concept, etc.)?	200	20%
2. Tech Review Paper - Each student is responsible for selecting 1) a tool from COPTR, and 2) a piece of hardware from the iSchool lab, and conducting background research on their development, functions, and current use.	350	35%
3. Real-Life Collection Planning, Part 1 –	150	15%

• This is a check-in to make sure you are on the correct path and to ask for any clarifications • Turn in your progress as of week 13		
4. Real-Life Collection Planning, Part 2 – • This is the final product	300	30%
Total Points	1000	100%

LATE WORK AND MAKING UP MISSED WORK

No late assignments will be accepted. Assignments are due when noted in the syllabus. Additional time to complete an assignment may be allowed under out of the ordinary circumstances. If you need additional time please contact me to discuss whether it can be allotted. Otherwise, 5% of your total grade for that portion of the assignment will be deducted for every day the assignment is late.

(For example: Student X does not request and then receive special allowances for an assignment to be turned in late. Student X turns in the assignment 2 days late. If the assignment is worth 20 points, the maximum grade they can receive is 18 points.)

ABSENCES

Being present is critical to achieving our goals for this course. You are welcome to utilize two class absences during the semester if needed. In this case, you will be allowed to make up assignments or participation points you may have missed during this session. Barring extraordinary circumstances, missing a class session will not add extra time on an assignment.

Excused Absence: If you need to miss more than two class sessions please contact me to discuss if those can be excused absences. Absences will be considered excused if they are for religious holidays or extenuating circumstances due to medical or family emergencies. If you plan to miss class due to observance of a religious holiday, please let me know at least two weeks in advance.

You will not be penalized for this absence, although you will still be responsible for any work you will miss on that day if applicable. Check with me for details or arrangements.

If you have to be absent, use your resources wisely. Ask your team and other classmates to get a run-down and notes on any lessons you miss. If you find there are topics that we covered while you were gone that raise questions, you may come by during office hours or schedule a meeting to discuss. Email specific questions you have in advance so that we can make the most of our time. “What did I miss?” is not specific enough.

GRADING POLICIES

This course does not use a curved grading scheme. See below for the points breakdown, note that plus (+) grades are used for certain ranges but minus (-) is not used.

Grade	Cutoff	Points Needed
A	90%	900
B+	85%	850
B	80%	800
C+	75%	750
C	70%	700
D	65%	650
F	<65%	<650

Course Outline

All instructions, assignments, readings, rubrics and essential information will be on the Canvas website at utexas.instructure.com. Check Canvas regularly. **Changes** to the schedule may be made at my discretion if circumstances require. I will announce any such changes in class and will also communicate them via a Canvas announcement. It is your responsibility to note these changes when announced, and I will do my best to ensure that you are notified of changes with as much advance notice as possible.

Week-by-week schedule begins next page (page 7) and goes to page 12, for easy printing purposes if you so wish.

Week Number & Date	Topics Covered + Reading Material	Exercises + Assignments Due
Week 1 – January 11, 2023	**Theme: Syllabus and Introductions** Topics: ○ Syllabus + Code of Conduct ○ What are digital archives and why do we preserve them? ○ Lab introduction Readings: ○ "What Does it Take to Be a Well-rounded Digital Archivist?" https://blogs.loc.gov/thesignal/2014/10/what-does-it-take-to-be-a-well-rounded-digital-archivist/ ○ Digital Preservation and Nuclear Disaster: An Animation - https://www.youtube.com/watch?v=pbBa6Oam7-w ○ Digital Library Federation Code of Conduct - https://www.diglib.org/about/code-of-conduct/	*Exercise:* Create a community code of conduct **Tech Review Paper Assigned (DUE February 8th)**
Week 2 – January 18, 2023	**Theme: What is archived?** Topics: ○ Appraisal ○ Working with Donors ○ Workflows Readings: ○ Critical Digital Archives - in Canvas under "Class 2" ○ Beyond the Workflow: Archivists' Aspirations for Digital Curation Practices - in Canvas under "Class 2" ○ Chapter Three: Acquisition Workflow, Creating Adaptable Digital Preservation Workflows - in Canvas under "Class 2"	*Exercise:* practice appraisal on own files and create workflow

Week 3 – January 25, 2023	**Theme: Storage Media** Topics: ○ Different types of storage media and storing the physical representation ○ Magnetic media vs Optical media Readings: ○ Archival Storage - https://www.iasa-web.org/book/export/html/546 ○ Why aren't optical disks the top choice for archive storage? - https://www.networkworld.com/article/3638116/why-aren-t-optical-disks-the-top-choice-for-archive-storage.html ○ An Optical Media Preservation Strategy for New York University's Fales Library & Special Collections - in Canvas under "Class 3"	*Exercise:* Identify types of storage media in lab and steps to take to preserve
Week 4 – February 1, 2023	**Theme: Acronym Week!** Topics: ○ NDSA Levels of Preservation ○ OAIS ○ PREMIS Readings: ○ NDSA Levels of Preservation - https://ndsa.org//publications/levels-of-digital-preservation/ ○ OAIS - http://www.oais.info/ ○ PREMIS - https://www.loc.gov/standards/premis/	*Exercise:* To be determined
Week 5 – February 8, 2023	***Asynchronous Online Class*** Readings: Read 1-2 other people's papers and leave constructive discussion about what you learned from them and answer any questions anyone has on yours	***DUE***: Tech Review Paper due Wednesday, February 8th by 6pm

		Central Time in Canvas
Week 6 – February 15, 2023	**Theme: Imaging, Metadata, and Authority** Topics: ○ What is imaging? ○ Metadata ○ Ensuring provenance Readings: ○ Disk Imaging Decision Factors, DANNNG - https://dannng.github.io/disk-imaging-decision-factors.html ○ EAD - https://www.loc.gov/ead/tglib/index.html ○ Hardware Write Blocker Device (HWB) Specification, NIST - https://www.nist.gov/system/files/documents/2017/05/09/hwb-v2-post-19-may-04.pdf ○ Software Metadata Recommended Format Guide - in Canvas under “Class 6”	*Exercise:* Imaging introduction: floppy disks, optical discs, and USBs
Week 7 – February 22, 2023	**Theme: Processing Tools** Topics: ○ BitCurator ○ Personally Identifying Information (PII) Readings: ○ Digital Processing Framework - in Canvas ○ BitCurator - https://bitcurator.net/bitcurator/ ▪ Quick Start Guide - http://distro.ibiblio.org/bitcurator/docs/BitCurator-Quickstart-v4.x.x.pdf ○ Brunnhilde - https://www.bitarchivist.net/projects/brunnhilde ○ BulkReviewer - https://bulk-reviewer.readthedocs.io/en/latest/ ○ BulkExtractor/BEViewer - https://github.com/simsong/bulk_extractor/wiki/BEViewer	*Exercise:* Explore BitCurator environment; Brunnhilde, BulkExtractor, and BulkReviewer

Week 8 – March 1, 2023	**Theme: Preservation Environments** Topics: ○ Archivematica ○ Preservica ○ Creating AIPs Readings: ○ Archivematica - https://www.archivematica.org/en/docs/archivematica-1.13/ ○ Preservica - https://preservica.com/heritage-digital-preservation-services	*Exercise*: Bagging material for ingest and playing in sandboxes
Week 9 – March 8, 2023	**Theme: Emulation, Migration, and Normalization; Access** Topics: ○ Migration vs Normalization vs Emulation - which one to use? ○ EaaSI - Emulation as a Service Infrastructure ○ Access methods Readings: ○ Digital Library Federation Born-Digital Access Working Group Access Values - in Canvas under “Class 9” ○ Legal and Ethical Considerations for Born-Digital Access – in Canvas under “Class 9” ○ Phil Mellor, Paul Wheatley, and Derek Sergeant, "Migration on Request, a Practical Technique for Preservation," CaMiLEON report from 2002. https://eprints.whiterose.ac.uk/3757/1/wheatleyp1_MigrationOnRequest.pdf ○ Kam Woods and Geoffrey Brown, "Migration Performance for Legacy Data Access," International Journal of Digital Curation 3(2), 2008. http://www.ijdc.net/index.php/ijdc/article/viewFile/88/59	*Exercise*: Play with EaaSI
Week 10 –	***SPRING BREAK - NO CLASS***	

March 15, 2023		
Week 11 – March 22, 2023	**Theme: Web and Social Media Archiving** Topics: ○ Archive-It ○ Conifer ○ Archiving: ▪ Websites ▪ Twitter ▪ Facebook, etc. ○ Using Commercial Products for Transfer Readings: ○ Conifer - https://conifer.rhizome.org/ ○ Archive-It - https://www.archive-it.org/	*Exercise*: Experiment with tools mentioned to the left **Real-Life Collection Planning Final Project Announced (Part 1 due Week 13; Part 2 due Week 15)**
Week 12 – March 29, 2023	**Theme: Email Archiving** Topics: ○ ePADD ○ TOMES ○ RATOM, etc Readings: ○ Email Archives: Building Capacity and Community, University of Illinois, https://emailarchivesgrant.library.illinois.edu/blog/ ○ ePADD - https://library.stanford.edu/projects/epadd ○ RATOM - https://ratom.web.unc.edu/	*Exercise*: Experiment with ePADD; *please have ePADD downloaded to your laptop*

	○ TOMES - https://www.ncdcr.gov/things-know/records-management/transforming-online-mail-embedded-semantics-tomes ○ One Size Does Not Fit All: Exploring Email Archiving Workflows - https://cdr.lib.unc.edu/concern/masters_papers/6q182r649?locale=en	*before class*
Week 13 – April 5, 2023	**Theme: Getting involved in the field** Topics: ○ Conferences in the field ○ Writing and publishing Readings: ○ To be determined	***DUE:* Real-Life Collection Planning Final Project Part 1 by 9PM Central**
Week 14 – April 12, 2023	**Theme: Wrap Up, Job Talks, and the Future of Digital Archives** Topics: ○ Job applications and processes ○ Brainstorm - future of digital archives Readings: ○ Find 2 job ads to bring in and discuss	*Exercise:* Job ad discussion
Week 15 – April 19, 2023	***Asynchronous Online Class – Final Project DUE by 11:59PM Central*** Readings: Watch 1-2 other people's presentations and leave constructive discussion about what you learned from them and answer any questions anyone has on yours by **Monday, April 24th at 11:59PM Central**.	***DUE:* Real-Life Collection Planning Final Project Part 2**

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Course Policies and Disclosures

ACADEMIC INTEGRITY EXPECTATIONS

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: http://deanofstudents.utexas.edu/conduct.

CONFIDENTIALITY OF CLASS RECORDINGS

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

GETTING HELP WITH TECHNOLOGY

Students needing help with technology in this course should contact the ITS Service Desk or the iSchool Help Desk.

CONTENT WARNING

Our classroom provides an open space for the critical and civil exchange of ideas. Some readings and other content in this course will include topics that some students may find offensive and/or traumatizing. I'll aim to forewarn students about potentially disturbing content and I ask all students to help to create an atmosphere of mutual respect and sensitivity.

BASIC NEEDS SECURITY

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. UT maintains the UT Outpost, which is a free on-campus food pantry and career closet. Furthermore, if you are comfortable notifying me, please do so, as I may have additional resources I can share.

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SHARING OF COURSE MATERIALS IS PROHIBITED

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class without explicit, written permission of the instructor. Unauthorized sharing of materials promotes cheating. The University is well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure of the course.

RELIGIOUS HOLY DAYS

By UT Austin policy, you must notify me of your pending absence as far in advance as possible of the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

NAMES AND PRONOUNS

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender identity & expression, and nationalities. Class rosters are provided to the instructor with the student's legal name, unless they have added a "chosen name" with the registrar's office, which you can do so here. I will gladly honor your request to address you by a name that is different from what appears on the official roster, and by the pronouns you use (she/he/they/ze, etc). Please advise me of any changes early in the semester so that I may make appropriate updates to my records. For instructions on how to add your pronouns to Canvas, visit this site. More resources available on the Gender and Sexuality Center's website, www.utgsc.org.

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LAND ACKNOWLEDGMENT

I would like to acknowledge that we are meeting on the Indigenous lands of Turtle Island, the ancestral name for what now is called North America. Moreover, I would like to acknowledge the Alabama-Coushatta, Caddo, Carrizo/Comecrudo, Coahuiltecan, Comanche, Kickapoo, Lipan Apache, Tonkawa and Ysleta Del Sur Pueblo, and all the American Indian and Indigenous Peoples and communities who have been or have become a part of these lands and territories in Texas.

University Resources for Students

DISABILITY & ACCESS (D&A)

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Disability & Access (D&A). Please refer to the D&A website for more information: http://diversity.utexas.edu/disability/. If you are already registered with D&A, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

COUNSELING AND MENTAL HEALTH CENTER (CMHC)

I urge students who are struggling for any reason and who believe that it might impact their performance in the course to reach out to me if they feel comfortable. This will allow me to provide any resources or accommodations that I can. If immediate mental health assistance is needed, call the Counseling and Mental Health Center (CMHC) at 512-471-3515 or you may also contact Bryce Moffett, LCSW (iSchool CARE counselor) at 512-232-2983. Outside CMHC business hours (8a.m.-5p.m., Monday-Friday), contact the CMHC 24/7 Crisis Line at 512-471-2255.

UNIVERSITY HEALTH SERVICES (UHS)

Your physical health and wellness are a priority. University Health Services is an on-campus high-quality medical facility providing care to all UT students. Services offered by UHS

include general medicine, urgent care, a 24/7 nurse advice line, gynecology, sports medicine, physical therapy, lab and radiology services, COVID-19 testing and vaccinations and much more. For additional information, visit https://healthyhorns.utexas.edu or call 512-471-4955.

SANGER LEARNING CENTER

Did you know that more than one-third of UT undergraduate students use the Sanger Learning Center each year to improve their academic performance? All students are welcome to take advantage of Sanger Center's classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit https://ugs.utexas.edu/slc or call 512-471-3614 (JES A332)."

STUDENT EMERGENCY SERVICES (SES)

Student Emergency Services in the Office of the Dean of Students helps students and their families during difficult or emergency situations. Assistance includes outreach, advocacy, intervention, support, and referrals to relevant campus and community resources. If you need to be absent from class due to a family emergency, medical or mental health concern, or academic difficulty due to crisis or an emergency situation, you can work with Student Emergency Services. SES will document your situation and notify your professors. Additional information is available at https://deanofstudents.utexas.edu/emergency/ or by calling 512-471-5017.

Important Safety Information

If you have concerns about the safety or behavior of fellow students, TAs or professors, contact BCCAL (the Behavior Concerns and COVID-19 Advice Line) at https://safety.utexas.edu/behavior-concerns-advice-line or by calling 512-232-5050. Confidentiality will be maintained as much as possible, however the university may be required to release some information to appropriate parties.

CLASSROOM SAFETY AND COVID-19

- For any illness, students should stay home if they are sick or contagious, not only to stop the spread, but also to promote their personal wellness.

- The university will continue to provide rapid antigen self-test kits at distribution sites throughout campus. Students can receive up to four tests at a time.
- The university will provide symptomatic COVID-19 testing on campus for all students, faculty and staff.
- UHS maintains up-to-date resources on COVID, which can be found here:
    - COVID-19 Information and Resources
    - COVID-19 Exposure Action Chart

CARRYING OF HANDGUNS ON CAMPUS

Texas' Open Carry law expressly prohibits a licensed to carry (LTC) holder from carrying a handgun openly on the campus of an institution of higher education such as UT Austin. Students in this class should be aware of the following university policies:

- Students in this class who hold a license to carry are asked to review the university policy regarding campus carry.
- Individuals who hold a license to carry are eligible to carry a concealed handgun on campus, including in most outdoor areas, buildings and spaces that are accessible to the public, and in classrooms.
- It is the responsibility of concealed-carry license holders to carry their handguns on or about their person at all times while on campus. Open carry is NOT permitted, meaning that a license holder may not carry a partially or wholly visible handgun on campus premises or on any university driveway, street, sidewalk or walkway, parking lot, parking garage, or other parking area.
- Per my right, I prohibit carrying of handguns in my personal office. Note that this information will also be conveyed to all students verbally during the first week of class. This written notice is intended to reinforce the verbal notification, and is not a "legally effective" means of notification in its own right.

TITLE IX DISCLOSURE

Beginning January 1, 2020, Texas Education Code, Section 51.252 (formerly known as Senate Bill 212) requires all employees of Texas universities, including faculty, to report any information to theTitle IX Office regarding sexual harassment, sexual assault, dating violence and stalking that is disclosed to them. Texas law requires that all employees who witness or

receive any information of this type (including, but not limited to, writing assignments, class discussions, or one-on-one conversations, or third party reports) must be report it. Before talking with me, or with any faculty or staff member about a Title IX related incident, please remember that I will be required to report this information to the Title IX Coordinator. If you would like to speak with someone who can provide support or remedies without making an official report to the university, please email supportandresources@austin.utexas.edu. For more information about reporting options and resources, visit http://www.titleix.utexas.edu/, contact the Title IX Office via email at titleix@austin.utexas.edu, or call 512-471-0419.

Although graduate teaching and research assistants are not subject to Texas Education Code, Section 51.252, they are still mandatory reporters under Federal Title IX laws and are required to report a wide range of behaviors we refer to as sexual misconduct, including the types of sexual misconduct covered under Texas Education Code, Section 51.252.The Title IX office has developed supportive ways to respond to a survivor and compiled campus resources to support all impacted by a Title IX incident.

CAMPUS SAFETY

The following are recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767,

- Students should sign up for Campus Emergency Text Alerts at the page linked above.
- Occupants of buildings on The University of Texas at Austin campus must evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire

Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

- For more information, please visit emergency preparedness.