

GEO 455S/485S
Introduction to Remote Sensing for Geoscientists
Spring 2022 (Unique # 27495/27645)

COVID-19 General Statement: We remain in the middle of a global pandemic, so, sadly, this course and semester will not be ‘as usual’. *My number one priority throughout this semester is to maintain the health and safety of y’all, your families and communities, and our broader university community.* This includes taking care of mental health, as I know the pandemic has added numerous, unique stresses to all of our lives; the UT community is here to support you through the UT Counseling and Mental Health Center (<https://cmhc.utexas.edu/>) and University Health Services (<https://healthyhorns.utexas.edu/>). I have designed this course to have lots of flexibility given the stressful and uncertain present situation, and if you are ever feeling overwhelmed in the semester, *please* come talk to me or seek the help you need. Myself and the TA will make every effort to be accommodating to y’all this semester, and I would ask that you extend us the same courtesy; we’re all trying our best ☺.

Course Delivery Mode: This course will be delivered entirely online. All scheduled meetings for lectures, labs, and office hours will be held on Zoom. Further logistical details are provided below. *Participation in this class will require internet access and a computer (either desktop or laptop, Mac or PC is fine); a tablet or smartphone alone will not be sufficient. If this will be a concern for you, please contact me ASAP so we can figure out how to get you the resources you need.*

Lecture Times: Monday and Wednesday, 2:30–4 PM

Lab Time: Monday, 10 AM – 12 PM

Note: All times are in Central Time (i.e., Austin’s time zone).

Instructor: Tim Goudge [*Personal Pronouns: He/Him*]

Email: tgoudge@jsg.utexas.edu

Note on Email Communication: For class related emails to the instructor/TA put “GEO 455S/485S:” at the start of the subject line. If you send an email after 5 PM, do not expect a response until the following day.

Office Hours: Tuesday 3–4 PM and Thursday 10–11 AM, or by appointment

Course Description:

This course will focus on the fundamentals of acquiring, processing, and interpreting remote sensing data. Laboratories will provide opportunities to develop applied skills in the use and analysis of remote sensing data for problems related to the geosciences, including the study of Earth and other planetary bodies. Topics to be covered include: physics of electromagnetic radiation and interaction with geologic materials; common techniques for remote sensing as applied to the geosciences (e.g., infrared spectroscopy, LiDAR, stereo-image-derived topography, SAR etc.); science goals and instruments onboard ongoing and planned remote sensing missions; and techniques for analysis of remote sensing data (e.g., image classification; spectral unmixing; stereogrammetry/structure from motion, etc.).

Expected Learning Outcomes:

At the end of the semester it is expected that students will be able to:

- Explain the basic physics of electromagnetic radiation, including the various ways in which this radiation can interact with matter (e.g., scattering, absorption, emission).
- Distinguish the different types of remote sensing platforms commonly used in the geologic sciences, and understand how these sensors are used to acquire data.
- Explain the basic properties of remote sensing data (e.g., image resolution, spectral resolution, signal-to-noise ratios).
- Understand what portions of the electromagnetic spectrum are used to study a variety of distinct material properties (e.g., composition, grain size, roughness).
- Acquire, process, analyze, and interpret a range of remote sensing datasets from the Earth, Moon, Mars, and other planetary bodies using the ENVI software package.
- Critically evaluate published geoscience papers that use remote sensing data.

Course Website (Canvas):

This course will rely heavily on the Canvas course website (<https://canvas.utexas.edu>) for all communication and announcements, scheduling and archiving Zoom meetings, posting and submitting lab assignments, posting lecture slides (*after* each class), and conducting quizzes. Students are *strongly* advised to check Canvas regularly (*at least* once per day), and/or turn on Canvas email notifications (so long as you also check your email at least once per day).

Online Instruction:

Our online learning environment will use Zoom for all scheduled meetings, with links integrated through Canvas. You must be signed into your official UT SSO account for access to class Zoom meetings; instructions on Zoom installation and use are here: <https://zoom.its.utexas.edu/>. During Zoom meetings, please mute yourself unless you are speaking, and be mindful of your surroundings if you have your video on (not required).

Myself and the TA are working hard to make this course enjoyable and as complete/rich a learning experience for y'all as possible; however, there will inevitably be technical glitches, so please have patience with us as we work through those challenges.

This class has the following major online instruction elements:

Lectures: Lectures will be delivered live via Zoom, and students are strongly encouraged to attend if they are able so that you may ask questions for clarification on presented material; however, lectures will also be recorded and archived on Canvas for later viewing.

Office hours: All office hours will be held on Zoom, and students can join/leave as fits their schedule. Students will be admitted from the waiting room in order.

Labs: The scheduled lab time will involve an introductory talk about the lab objectives on Zoom (also recorded), followed by an open Zoom meeting where students can work on their lab assignment and ask questions as needed. Students are strongly encouraged to work through the lab assignment during this time period so they can have access to direct feedback and help with any problems they encounter.

As part of online instruction, there are two important statements all students must be aware 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.

Course Materials: No materials used in this class, including, but not limited to, lecture slides, videos, assessments (quizzes, exams, lab assignments), and review sheets, may be shared online or with anyone outside of the class unless you have the explicit, written permission of the instructor. Unauthorized sharing of materials promotes cheating, and is a violation of the University's Student Honor Code and an act of academic dishonesty. Any materials found online (e.g., on sites used for sharing course materials) that are associated with a student in this class, 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 in the course.

Class Environment:

An integral goal for this class is to provide everyone with an opportunity to learn in a safe, inclusive, and supportive environment. This class respects and welcomes students of all backgrounds, identities, and abilities. ***I expect each and every one of you to exemplify this collective goal – there is a ZERO TOLERANCE policy for harmful and disrespectful language and actions, both towards each other and towards the instructor, TA, and other guest lecturers.*** If you are having issues with the classroom environment, *please* come talk with me during office hours (or via email). If you feel uncomfortable talking to me directly about issues you are having

with the class environment, you can reach out to Prof. Ginny Catania (gcatania@ig.utexas.edu) to provide me with anonymous feedback.

Text and Readings:

The primary text for this class will be the online, open-source textbook *Principles of Remote Sensing, 4th Edition* edited by Tempfli, Kerle, Huurneman, and Janssen. A PDF of this text will be posted to Canvas and can also be accessed here: https://webapps.itc.utwente.nl/librarywww/papers_2009/general/PrinciplesRemoteSensing.pdf.

This text will provide weekly readings relevant to the topic to be discussed; however, for certain topics, there will be readings from other sources, which will also be posted to Canvas. ***These readings are not required, but are highly recommended to provide further details and solidify concepts discussed in class.*** Readings will be most effective if they are started before the Monday class of each week so as to prepare students for the material to be discussed in lecture that week.

Grades:

Your final grade in the class will be assigned based on the following breakdown (*each item is described further below*):

<i>Assignment</i>	<i>% of Final Grade</i>	<i>Date Due</i>
Lab Assignments	40%	Mondays at 10 AM (<i>starting Feb. 7</i>)
Checkpoint Quizzes	15%	Fridays at 6 PM (<i>starting Jan. 28</i>)
Group Paper Summary	10%	One of: Feb. 16, Mar. 9, Mar. 30, or Apr. 20
Group Paper Summary Reflection	5%	5 PM two business days after paper discussions (<i>Feb. 18, Mar. 11, Apr. 1, or Apr. 22</i>)
Paper Discussion Questions	10%	5 PM two business days before paper discussions (<i>Feb. 14, Mar. 7, Mar. 28, and Apr. 18</i>)
Final, Take-Home Exam	20%	Friday May 6 at 6 PM

This class will assign final letter grades on the +/- scale, with the following standard UT grade boundaries as guidelines:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
≥94	90-93	87-89	84-86	80-83	77-79	74-76	70-73	67-69	64-66	60-63	<60

Labs:

A major component of this class is labs, which are aimed at giving you applied skills in remote sensing data analysis using the ENVI software

package. Access to ENVI will be made available through the Citrix platform, which provides a virtual PC desktop environment. Instructions on how to install and access Citrix/ENVI are posted to Canvas (*Lab 0 handout*) and will be covered in our first lab period (Jan. 24).

Each lab will have an assignment handout for you to work through, which will be posted online prior to the lab time. The lab handout will guide you through various exercises and related questions. ***These assignments are due at the beginning of the next lab period (i.e., the next Monday at 10 AM), to be submitted via Canvas.*** There is typically no need to provide long (paragraph-length) answers, and you will often be asked to show your results, in which case you should include a figure (if it is a plot, make sure the axes are labeled correctly!). In almost all instances, a screenshot will be sufficient for figures. All lab handouts will follow the same formatting, where background information will be in plain text, *instructions will be listed in italics*, *questions will be listed in blue italics*, and ***labels for software buttons will be listed in green bold italics***. You should upload your final completed assignment to Canvas with the following naming convention to help us keep track: ***Intro_Remote_Sensing_Lab1_UTEID***, where you fill in the lab number and your EID.

There are a total of 10 graded labs in this course, which will comprise 40% of the final grade. Your final grade will be calculated using only your top 9 lab grades, meaning ***each lab is worth >4% of your final grade***. Lab assignments are designed to be mostly completed within the 2 hour lab timeslot, although the write-up may take you additional time. If you find yourself stuck on certain aspects of a lab assignment and spending >5 hours working to complete it, please come to instructor and/or TA office hours.

Lab Time Bank Policy: It is a fact of life that sometimes we all have bad days, bad weeks, or even bad semesters. This is especially true now. So, I have adopted a “time bank” policy for this course. This policy allows you to, for up to two lab assignments, take a no-questions-asked two-day extension and hand in that lab assignment by 10 AM on Wednesday (instead of Monday). ***In order to take this extension, you must email me and the TA by Monday at 9 AM before the lab is due.*** You do not have to utilize this policy, and as with the rest of the class, I expect professional behavior, so please do not take advantage of this policy unnecessarily.

Checkpt. Quizzes: Every Thursday at 9 AM (starting the 2nd week of class) there will be a short quiz posted to Canvas (~3-4 multiple choice or true/false questions), which must be completed by 6 PM the following day (Friday). These quizzes are open book, but you will have only 10 minutes to complete it once you start. Questions are meant to reinforce lecture material covered that week, and you will get 75% of the grade for each quiz simply for completing it.

Paper Discussions: Four times throughout the semester (on Feb. 16, Mar. 9, Mar. 30, and Apr. 20) we will read and critically evaluate published papers that use remote sensing data to address geoscience problems. These discussions will comprise three different elements of your assessment and final grade in this class.

First, at the start of the semester you will be split into four, randomly assigned groups. Each group will be responsible for leading the discussion on one paper (***Group Paper Summary***). This discussion will take up ~30-40 minutes of class time on the above listed dates, and will include a paper summary, paying particular attention to the remote sensing methods used, and discussion based on class questions (see below). This group presentation will be worth 10% of your final grade.

Second, you will also be asked to complete a short reflection on the qualitative contribution of each group member (yourself included!) to the paper discussion presentation (***Group Paper Summary Reflection***). I am not looking for critical comments, just a fair reflection on how everyone contributed to encourage equal participation (see example below). This assignment will be marked for completion only and will be worth 5% of your final grade. It will be due (via email to the instructor) at 5 PM two business days after your group presentation (i.e., the Friday after the Wednesday group presentation date). An example reflection might read as follows: “*Person A (me): I did background reading on the remote sensing techniques used, created the background/approach slides, and presented those slides in class. Person B: Did detailed reading of the paper to pull out the results and place them in context of past work, created the results slides, and presented those slides in class. Person C: Did detailed reading of the discussion section of the paper to pull out the interpretations and indicate how they are supported by the results, created the discussion section slides, and presented those slides in class. Person D: Collated the discussion questions from class members, created relevant slides, and presented those slides in class.*”

Finally, to help facilitate paper discussions, every class member who is not presenting will be required to come up with a discussion point or question related to the paper (***Paper Discussion Questions***). For a place to start, discussion points can focus on: (1) something you enjoyed about the paper; (2) something about the paper you thought could have been better; or (3) something mentioned in the paper you would like to learn more about. Discussion points will be posted to a dedicated thread on Canvas, and will be due at 5 PM two business days before the paper discussion (i.e., the Monday before the Wednesday group presentation date). Discussion points are worth 10% of your final grade, and will be based purely on completion.

Take-Home Exam: This class will have a final exam that will integrate knowledge from the whole semester. It will be open book and you will have access to all of your course materials, *except* lecture recordings, which will be taken offline for the exam time period, starting ~30 minutes before the exam. The take-home exam will be posted to Canvas Wednesday May 4 at 9 AM, and due Friday May 6 at 6 PM, and you can work on this exam any time during this window as suits your schedule. It will be designed to take <3 hours.

Extra Credit: To get extra credit of 1 percentage point on your final grade, you can send me a link to any news article from this semester (dates Jan.–May 2022) that discusses use of any type of remote sensing analysis in a real world application, PLUS your ~4-5 sentence summary of the article. Each submission will provide an increase of 1 percentage point on your final grade, and you can send up to three article summaries. Submissions must be received by Monday May 9 at 5 PM.

Policy on Working Together: I am more than happy to have students work together to figure out the lab assignments, and I encourage y'all to learn from each other by discussing ideas and techniques. However, *all final answers, plots, figures, etc. for each submitted assignment must be your own; direct sharing of answers is not permitted, and if this is deemed to be the case, a grade of ZERO will be assigned.* Furthermore, *working together on quizzes or the take-home exam is NOT allowed, and students found to be sharing exam/quiz answers will be assigned a grade of ZERO.* See also below the University of Texas Honor Code.

Deadlines & Policy on Late Assignments: Lab assignments will be due via Canvas every Monday at 10 AM. Lab assignments that miss this deadline will automatically lose 10% from the grade for that assignment, as well as an additional 10% for every subsequent 24 hour period. Late quizzes will be assigned a grade of zero, and late take-home exams will lose 50% of the grade for every 24 hour period they are late. However, given the ongoing COVID-19 pandemic, I will aim to provide as much flexibility as is reasonable for make-up/late lab assignments or exams missed due to unforeseen circumstances or an agreed upon absence; please contact me ASAP if you anticipate a scheduling conflict with any of the assignment due dates.

Workload Policy: I know that the COVID-19 pandemic affects us all in different and unique ways. My hope for this class is to provide y'all with as full a learning experience as possible, and to not over-burden you with work. If you find that the workload this semester is becoming too much to manage, *please* come talk with me so we can work towards a solution.

Office Hours and Course Feedback:

If there is any material covered in class or lab assignments that you are unclear about, *please* come talk with me and/or the TA about this. I am a strong proponent of the idea that there is no bad question, and I want everyone to get as much as possible from this course. The scheduled times for office hours are listed at the top of this syllabus, and I am also available to meet with students by appointment. As a professional courtesy to me, please use email to set up an appointment at least 48 hours in advance.

I am always looking for ways to improve this course, so if you have any constructive feedback on things you like, don't like, or think could be improved about this class, you can submit anonymous feedback here: <https://forms.gle/jDenczQqdKssQ1B3A>.

Careers Using Remote Sensing:

In addition to academic/research careers in the geosciences (and other sciences), there are many potential career options that make use of remote sensing data. Below I have included some basic information on types of jobs/employment opportunities that utilize remote sensing skills. If you have additional questions, please feel free to ask me about them! Example companies and government agencies that employ people with a remote sensing background include: Google; Planet Labs, Inc.; DigitalGlobe; Boeing; BAE Systems; Department of Defense; NGA; NASA; NOAA; NSA; CIA; and the USGS. Some example jobs that use remote sensing skills include:

- Image Analyst: *extract meaningful information from remote sensing data; interpret image content.*
- Image Processor: *produce high-level data products for clients from raw data (e.g., atmospheric/geometric/topographic corrections); verify data quality.*
- Mission Controller: *target and acquire satellite/aerial images.*
- Geologist/Environmental Consultant: *use remote sensing data to assess sites that require geologic/environmental monitoring.*

Acknowledgements: The material presented in this course (lectures, labs, etc.) is adapted from/inspired by numerous generous colleagues, primarily Prof. Deanne Rogers (Stony Brook), Prof. Mark Salvatore (N. Ariz. Univ.), Prof. Jack Mustard (Brown Univ.), Prof. Melissa Rice (W. Washington Univ.), Prof. Ralph Milliken (Brown Univ.), and Prof. Jack Holt (Univ. Arizona), as well as from the UT Faculty Innovation Center.

Notional Course Schedule

The schedule below is notional, and I plan to modify it based on feedback from y'all about the class pace and content. Major schedule changes will be announced in class/on Canvas with as much advance notice as possible, and it is the responsibility of students to note such changes.

	Week of	Class Topic(s)	Lab Topic(s)	Readings and Paper Discussions
1	Jan. 17	Introduction to data types. Basics of electromagnetic (EM) radiation.	-	Mustard (2017)
2	Jan. 24	Understanding EM radiation and interaction with matter.	Introduction to lab environment.	Tempfli et al., Chapter 2
3	Jan. 31	Path of radiation through the atmosphere. Remote sensing platform and sensor types.	Introduction to ENVI software.	Tempfli et al., Chapters 3 & 4
4	Feb. 7	Image properties and interpretation.	Using ENVI to analyze image cubes.	Tempfli et al., Chapter 7
5	Feb. 14	Landsat and other remote sensing systems. Visible to near-infrared (VNIR) spectroscopy.	Basic image manipulation.	Gaffey et al. (1993) Weds. Feb. 16 – Doake and Vaughan (1991)
6	Feb. 21	VNIR spectroscopy cont'd.	Acquiring data. Atmospheric corrections.	Tempfli et al., Chapter 13
7	Feb. 28	VNIR spectroscopy cont'd 2.	Multispectral VNIR analysis.	None
8	Mar. 7	Spectral parameters. Effects of grain size and spectral mixing.	Hyperspectral VNIR analysis.	Weds. Mar. 9 – Ehlmann et al. (2008)
-	Mar. 14	Spring break.		
9	Mar. 21	Vegetation indices. Thermal infrared (TIR) spectroscopy.	<i>Hyperspectral VNIR analysis cont'd.</i>	Tempfli et al., Chapter 12
10	Mar. 28	TIR spectroscopy cont'd.	NDVI + vegetation.	Weds. Mar. 30 – Hamilton et al. (2019)
11	Apr. 4	Radio detection and ranging (RADAR).	TIR analysis.	Tempfli et al., Section 10.2
12	Apr. 11	RADAR cont'd. Topography.	Analysis of RADAR data.	None
13	Apr. 16	Stereogrammetry/Structure from Motion (SfM). Light detection and ranging (LiDAR).	Analysis of LiDAR and DEMs.	Tempfli et al., Section 10.3; Jensen (2007), Chapter 6 Weds. Apr. 20 – Mason and Mohrig (2019)
14	Apr. 25	Image processing and analysis techniques.	Image processing techniques. (<i>Optional ungraded lab</i>)	Richards and Jia (2006), Chapters 5 & 6; Tempfli et al., Chapter 8
15	May 2	Class wrap up and hand out final take-home exam.	None	None

COVID-19 Information:

COVID-19 Vaccinations: UT Health information about where to obtain COVID-19 vaccinations on campus can be found here: <https://uthealthaustin.org/patient-resources/covid-19-updates/covid-19-vaccination>. *Vaccinations are free and not billed to health insurance.*

Student Process for a Positive COVID-19 Test: Guidance for students that have a positive COVID-19 test can be found here: https://healthyhorns.utexas.edu/coronavirus_self_report.html. *This class has no attendance requirements, and you will not be penalized for missing class if you are sick.* If you are feeling sick, here are some guidelines of what you should do: https://healthyhorns.utexas.edu/coronavirus_recommendation.html.

Proactive Community Testing: COVID-19 tests will be available throughout the semester and remain an important part of the University's efforts to protect our community. *Tests are fast and free.* More information here: https://healthyhorns.utexas.edu/coronavirus_proactive_testing.html.

Further Information: Additional COVID-19 health information and resources can be found here: https://healthyhorns.utexas.edu/coronavirus_tools.html. All University COVID-19 updates and information can be found here: <https://protect.utexas.edu/>.

Additional Information on Classroom & University of Texas at Austin Policies:

Student Rights & Responsibilities: As a student in this class, you have the following rights:

- You have a right to a learning environment that supports mental and physical wellness.
- You have a right to respect.
- You have a right to be assessed and graded fairly.
- You have a right to freedom of opinion and expression.
- You have a right to privacy and confidentiality.
- You have a right to meaningful and equal participation.
- You have a right to self-organize groups to improve your learning environment.
- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

Along with these rights, as a student in this class come the following responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the instructor/TA and with others if things start to feel out of control or overwhelming.
- You are responsible for acting in a way that is worthy of respect and always respectful of others.
- You are responsible for your experience with this course, which is directly related to the quality of the time that you bring to it.
- You are responsible for creating and maintaining an inclusive environment and for speaking up when someone is excluded.
- You are responsible for holding yourself accountable to these standards, holding each other to these standards, and holding the instructor/TA accountable to these standards.

Learning Success & Accommodations: Your success in this class is of utmost importance to me. I recognize that we all learn differently, and so if there are any aspects of this course that prevent you from learning most effectively or exclude you, *please* let me know as soon as possible. Together we will work to develop strategies to meet both your learning needs and the requirements of the course.

Safety Information: If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCAL (the Behavior Concerns Advice Line): 512-232-5050. Your call can be anonymous. If something doesn't feel right, it probably isn't. Trust your instincts and share your concerns.

Personal Pronoun Use (She / He / They / Ze / Etc.): Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by a different name and/or personal pronoun. If you feel comfortable, please advise me of this change early in the semester so that I may make appropriate updates to my records. For reference, the instructor and TA personal pronouns are listed on the first page of this syllabus.

Title IX Reporting: Title IX is a federal law that protects against sex and gender based discrimination, sexual harassment, sexual assault, sexual misconduct, dating/domestic violence and stalking at federally funded educational institutions. UT Austin is committed to fostering a learning and working environment free from discrimination in all its forms. When sexual misconduct occurs in our community, the university can:

1. Intervene to prevent harmful behavior from continuing or escalating;
2. Provide support and remedies to students and employees who have experienced harm or have become involved in a Title IX investigation;
3. Investigate and discipline violations of the university's relevant policies.

Faculty members and certain staff members are considered "Responsible Employees" or "Mandatory Reporters," which means that they are required to report violations of Title IX to the Title IX Coordinator. ***The instructor and TA for this course are Responsible Employees and must report any Title IX related incidents that are disclosed in writing, discussion, or one-on-one.*** Before talking with me, the TAs, or with any faculty or staff member about a Title IX related incident, be sure to ask whether they are a Responsible Employee/Mandatory Reporter. If you want to speak with someone for support or remedies without making an official report to the university, email advocate@Austin.utexas.edu. For more information about reporting options and resources, visit <https://titleix.utexas.edu/> or contact the Title IX Office at titleix@Austin.utexas.edu.

The University of Texas Honor Code: The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

We maintain a zero-tolerance policy on academic dishonesty, which includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student or another individual (such as, but not limited to, submission of essentially the same written assignment for two classes or courses without

the prior permission of the instructor), or the attempt to commit such an act. A full and comprehensive statement about University policy on academic dishonesty can be found in Appendix C, section 11-402 of the General Information bulletin (<http://catalog.utexas.edu/general-information/appendices/appendix-c/student-discipline-and-conduct/>).

Religious Holy Days: Religious holy days sometimes conflict with class and examination schedules. If you miss an examination or lab assignment due to the observance of a religious holy day you will be given an opportunity to complete the work missed within a reasonable time after the absence. It is the policy of the University of Texas at Austin that you must notify each of your instructors at least fourteen days prior to the classes scheduled on dates you will be absent to observe a religious holy day.

Services for Students with Disabilities: If there are circumstances that make our learning environment and activities difficult or unsafe for you, or if you have medical information that you need to share with me, please let me know as soon as possible. I am committed to creating an effective learning environment for all students, but I can only do so if you discuss your needs with me as early as possible. I promise to maintain the confidentiality of these discussions. If appropriate, also contact Services for Students with Disabilities at 512-471-6259 (voice) or 512-410-6644 (videophone). More information can also be found here: <http://ddce.utexas.edu/disability/about/>.

Use of Canvas: This course uses Canvas, a Web-based course management system in which a password-protected site is created for each course. Canvas is used to distribute course materials, to communicate and collaborate online, to post grades, to submit assignments, and to take online quizzes and surveys.

You will be responsible for checking the Canvas course site regularly for class work and announcements. As with all computer systems, there are occasional scheduled downtimes as well as unanticipated disruptions. Notifications of these disruptions will be posted on the Canvas login page. Scheduled downtimes are not an excuse for late work. However, if there is an unscheduled downtime for a significant period of time, we will make an adjustment if it occurs close to a due date.

Canvas is available at <https://canvas.utexas.edu>. Support is provided by the ITS Help Desk at 512-475-9400 Monday through Friday 8 AM to 6 PM, so plan accordingly.

University E-mail Notification Policy: All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in her or his e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at: <https://it.utexas.edu/policies/university-electronic-mail-student-notification-policy>.