

# AET 334C Level Design

**UID:** 21635

**Meetings:** MW 9:30-11am

**Course Mode:** Online

**Professor:** MJ Johns (they/them)

**Email:** [mjohns@austin.utexas.edu](mailto:mjohns@austin.utexas.edu)

**TA:** Garret

**Office Hours:** MW 11am-noon

**Zoom Office:** mj.aet

**TA Office Hours:**

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## Overview

This course is an introduction to building interactive and visually appealing 2D or 3D levels in game engines and level editors. This includes ideation and concept design, whiteboxing, integrating art/sound assets, scripting interactions, and adding animations and particle effects, as well as playtesting and iterating based on user feedback. Emphasis will be on creating a cohesive playable experience with a clear player goal.

## Prerequisites

Foundations of Game Development (AET 318) and Foundations of Creative Coding (AET 310) are required prerequisites. In addition, you should be comfortable working in a game engine such as Unity (typically covered in the two classes above).

## Units of Study



- ❖ **Ideation and Iteration**
  - Brainstorming and research
  - Design concepts
  - Working solo vs. collaboratively
  - Level flow
  - Top-down layouts
- ❖ **World-Building**
  - Whiteboxing
  - Art and sound
  - Narrative design
- ❖ **Interactivity**
  - Creating interactive experiences
  - Game mechanics
  - Gameplay scripting
  - Polish and juice
- ❖ **Assessing and Analyzing**
  - Analyze existing levels
  - Playtest and reviewing feedback
  - Self-reflection

## Assessment

All homework assignments are equally weighted toward 50% of the final class grade. Two small projects will be worth 10% each, and one large project will be worth 15% and due at the end of the semester. Assignments are due by the start of class on Mondays unless otherwise specified. Participation and Attendance account for 15% of the final grade.

**Late Work:** It is important to discuss extensions at least 48 hours before a deadline. Same-day extensions *will not* be granted except in the event of an emergency, but with enough notice an alternative deadline can be arranged.

Teams will be expected to meet and work together outside of class. Be prepared to schedule 2-3 hours per week outside of class for team meetings and collaboration. Synchronous class time will also be set aside for group work.

**Note: If you cannot attend class for any reason, please email the instructor/TA and review the Zoom recording and complete any in-class activities.**

## Learning Outcomes

Upon successful completion of this course, you will be able to:

- ❖ Analyze an existing game level to assess its flow and difficulty ramp
- ❖ Design and build a playable game level in an industry-standard tool
- ❖ Compare and contrast development at large studios vs. small studios
- ❖ Integrate and modify art and sound assets to create a cohesive world
- ❖ Collaborate with teammates to create a shared vision
- ❖ Document and present your design process

These skills will benefit you in your future collaborative projects as well as helping prepare you for a career in game development.

You are encouraged to consider your own learning goals for this semester. Write them down and periodically check to see if you are working towards them. Goals should be Specific, Measurable, Attainable, Relevant, and Time-bound (S.M.A.R.T. Goals).

## Required Equipment & Material

All students must have access to a computer (Mac or PC) that can run Unity, and internet access. If you do not, please seek help through [Texas One Stop](#).

Recommended: USB or Bluetooth mouse - laptop touchpads are not ideal for Unity.

## Resources

[Getting Started with Unity](#)

[MJ's Tutorial Series](#)

(Optional Textbook) The Art of Game Design by Jesse Schell

(Optional Textbook) Game Development Essentials: Game Level Design

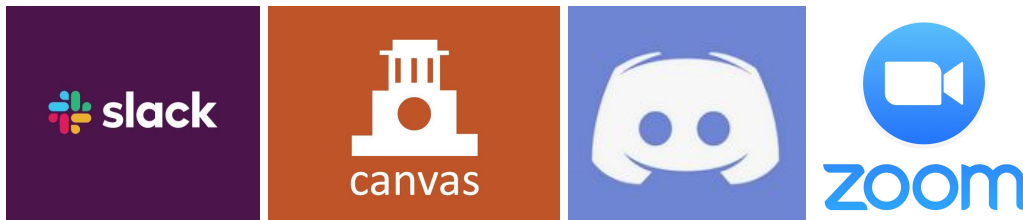
(Optional Textbook) Game Feel by Steve Swink

## Classroom Policy

This course will have synchronous meetings on Zoom (set-up your account at (<https://utexas.zoom.us/>)). You can find the Zoom meeting links on Canvas under the Zoom tab. You must be logged in with a UT ID to access the classroom. If you have trouble logging in please contact IT for help.

In an effort to create a community and get to know each other, you are expected to have your face visible during the synchronous Zoom meetings either using a webcam, or by having a recent photo for your Zoom profile picture (*not an icon, avatar, or gif*).

We will have asynchronous discussions and activities on Canvas and on Slack or Discord.



Participation in both the synchronous Zoom and the asynchronous chat counts towards your Participation grade - please be respectful of others at all times.

***Class Recordings Notice:*** *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.*

## Process

This is a Flipped/Blended class, meaning that videos/readings/games will be assigned to complete outside of class, and class time will be reserved for discussions, activities, and group work. Come prepared to contribute to each class and be actively engaged.

Most projects and activities in this class will be collaborative and will involve critical thinking and problem solving while working with others. You will build on prior skills in art, audio, code, and design to contribute to the group and solo projects.

### What Will You Do?

- Design iteratively and work collaboratively
- Be creative and thoughtful
- Solve technical challenges
- Help (and learn from) your classmates

### What Will You Make?

- Three (3) game levels that are...
  - Playable and functional
  - Cohesive
  - Aesthetically pleasing

## Calendar

Wk		Topic	Assignment Due
1	1/20	Course Intro, small vs. large studio design process	
2	1/25 1/27	Interaction Points and Interest Curve (Layout) History of Level Design (why are there levels?)	HW 1: Level Analysis (chosen game)
3	2/1 2/3	Narrative, Combat, and Puzzle Design in Levels Vantage Points, Exploration, Level Flow	HW 2: Layout and Design Doc
4	2/8 2/10	Level Presentations 2D vs. 3D Layouts and Whiteboxing	<b>Project 1: Playable Level (existing game)</b>
5	2/15 2/17	Playable Characters Scripting Interactions and Objectives	HW 3: Whitebox Screenshots
6	2/22 2/24	Playtesting and Using Feedback World Building (Art, Ambient Sound, and Narrative)	HW 4: First Playable
7	3/1 3/3	Playable Tutorials Polish, Juice, and Game Feel	HW 5: Beautiful Corner
8	3/8 3/10	Level Showcase Distributed Development in the Games Industry	<b>Project 2: Solo Level (Game Engine)</b>
9		<i>Spring Break March 15-20</i>	
10	3/22 3/24	Collaborative Design and Brainstorms Project Planning and Deadlines	HW 6: Self-Reflection (both solo projects)
11	3/29 3/31	Advanced Scripting, Merging, Version Control Matching Visual/Audio Styles	HW 7: Design Doc, Layout, Trello
12	4/5 4/7	Table-Top Level Design Discussion Remote Playtesting and Surveys	HW 8: Dungeons and Dragons
13	4/12 4/14	Lab Midpoint Presentations	
14	4/19 4/21	Open Beta, Quality Assurance, Early Access Game Publishing	HW 9: Minimum Viable Product
15	4/26 4/28	Game Design Careers Discussion Lab	HW 10: Game Design Careers
16	5/3 5/5	Final Presentations Post-Mortem / Self-Reflection	<b>Project 3: Team Unity Level</b>

## Study Habits

### Time Management

A valuable skill for traditional classes, and a crucial skill for online/hybrid classes. Take control of your schedule and optimize your time for success. Below you will find several excellent resources for better managing your time:

- [Randy Pausch's Time Management](#)
- [Time Management Fundamentals](#)
- [Tips for Working Remotely](#)
- [Remote Office Productivity](#)

### Note Taking

Taking notes helps you to retain more of the information you are learning. Although it may seem unnecessary for pre-recorded lectures (after all, you can rewatch them anytime), I encourage you to consider the value of the note taking process even for asynchronous material.

- [Study Skills \(Part 2: Note Taking\)](#)

### Remote Work

While colleges converted to online out of necessity, remote work in the tech industry has been commonplace for years. It is highly likely you will work in some kind of online setting during your career. This class is an opportunity to practice skills for success in an online environment.

- [Video Conference Presence](#)
- [Writing Business Emails](#)
- [Virtual Teams](#)
- [Freelancing Tips](#)

## Universal Design for Learning (UDL) & Inclusive Instructional Design (IID)

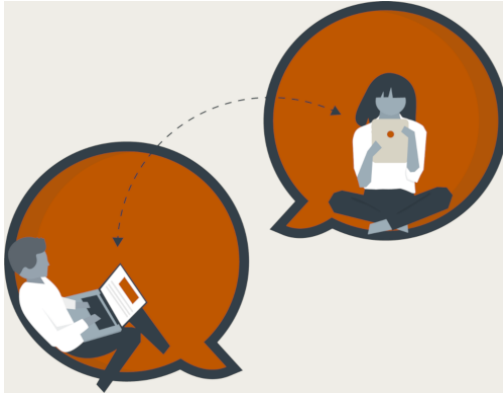
This course was designed following principles of Universal Design for Learning and Inclusive Instructional Design. Wherever possible, course materials will be provided in a variety of different formats including text, video, audio, and interactive (games).

Other accessibility considerations have been made such as text versions or Closed Captions, screen reader capability, and flexible deadlines and attendance. There are no timed tests - all quizzes will have unlimited time and allow multiple attempts. Excused absences will be allowed provided you give advance notice to instructor and teammates, and complete the in-class activity on your own time.

## Flexible Attendance Policy

As detailed above, attending class during the scheduled synchronous Zoom meeting times earns Participation credit. Class time will be used for collaborative activities, and students must be *active participants* to receive credit.

If attending a scheduled class meeting is not possible, students should promptly notify the instructor and TA and provide an update of their progress to teammates, or complete relevant class activities on their own time. **There is no need to provide a reason for your absence, all absences will be excused if you contact us by the end of the day.**



All absences will be excused if you inform us by the end of the missed class day and provide the relevant updates. An emergency absence can also be excused after the fact (such as medical/family emergency or loss of internet).

*Communication with instructors and teammates is crucial. If you do not inform us of the absence, it will be “unexcused” and will count against attendance/participation points.*

### University Attendance Policy: Religious Holy Days

As discussed in the above, all absences will be excused provided you inform me prior to the absence, including observance of a religious holy day.

## Services for Students with Disabilities (SSD)

As stated above, this course was designed to be accessible and inclusive to all, however there may still be cases where accommodations need to be made. If you feel there are any barriers you might face, whether documented or not, please feel free to discuss them with me. **I am open to any ideas you have that will make this course better for you.**

The University of Texas at Austin provides academic accommodations for qualified students with disabilities. For more information, contact Services for Students with Disabilities (512-471-6259, [ssd@austin.utexas.edu](mailto:ssd@austin.utexas.edu), <http://ddce.utexas.edu/disability/>, or videophone 512-471-6644).

## Grades

Homework: 50%

Attendance and Participation: 15%

Project 1: 10%

Project 2: 10%

Project 3: 15%

Bonus: Up to 5% bonus for completing a Game Jam during the semester (and presenting)

Final grades will be determined on the basis of the following rubric. Please note: to ensure fairness, all numbers are absolute, and will not be rounded up or down. Thus B- is inclusive of 80.0 through 83.9. The University does not recognize the grade of A+.

A = 94-100	A- = 90-93	B+ = 87-89
B = 84-86	B- = 80-83	C+ = 77-79
C = 74-76	C- = 70-73	D+ = 67-69
D = 64-66	D- = 60-63	F = 0-60

## Resubmitting Assignments

If you are concerned by an assignment grade, you may request to resubmit. If it is a team assignment, all team members must be involved in this conversation. Please provide an explanation of what you will improve to earn an increased grade.

## Personal 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, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name, unless they have added a "preferred name" with the Gender and Sexuality Center (<http://diversity.utexas.edu/genderandsexuality/publications-and-resources/>).

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 gender 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.

## Behavior Concerns Advice Line (BCAL)

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit <http://www.utexas.edu/safety/bcal>

## Q Drop Policy

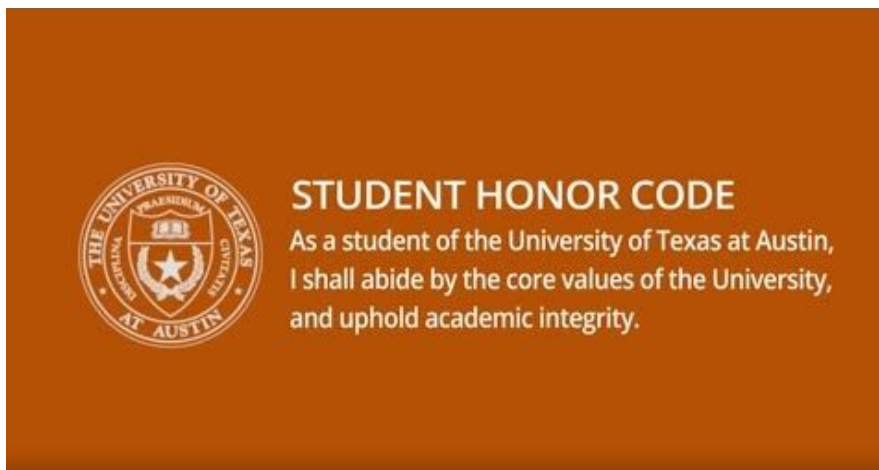
The State of Texas has enacted a law that limits the number of course drops for academic reasons to six (6). As stated in Senate Bill 1231: “Beginning with the fall 2007 academic term, an institution of higher education may not permit an undergraduate student a total of more than six dropped courses, including any course a transfer student has dropped at another institution of higher education, unless the student shows good cause for dropping more than that number.”

## Campus Carry

The concealed carry of handguns by permit holders is generally allowed in outdoor areas, as well as buildings and spaces that are accessible to the public. The open carry of handguns is not permitted on campus. Anyone who sees an openly carried gun on campus should immediately call 911.

Concealed-carry permit holders are allowed to carry in classrooms. It is the responsibility of concealed-carry permit holders to carry their handguns on or about their person at all times while on campus. “About their person” means that a concealed-carry permit holder may carry a holstered handgun in a backpack or handbag, but the backpack or handbag must be close enough that the license holder can grasp it without materially changing position. The holster must completely cover the trigger area and have enough tension to keep the gun in place if jostled. A concealed-carry permit 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. For more information go to: <https://campuscarry.utexas.edu/students>.

## Academic Integrity



The University's Honor Code states that “As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity.” You are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University.



At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:

- acknowledge the contributions of other sources to your scholastic efforts
- follow instructions for assignments and observe the standards of your discipline
- avoid engaging in any form of academic dishonesty

(adapted from [http://deanofstudents.utexas.edu/sjs/acint\\_student.php](http://deanofstudents.utexas.edu/sjs/acint_student.php))

## Academic Dishonesty

In promoting a high standard of academic integrity, the University broadly defines academic dishonesty as including any act designed to give an unfair or undeserved academic advantage, such as: Cheating, Plagiarism, Unauthorized Collaboration / Collusion, Falsifying Academic Records, Misrepresenting Facts (e.g., providing false information to postpone an exam, obtain an extended deadline for an assignment, or even gain an unearned financial benefit), Multiple submissions (submitting essentially the same written assignment for two courses without authorization to do so), Any other acts (or attempted acts) that violate the basic standard of [academic integrity](#).

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.

(from [http://deanofstudents.utexas.edu/sjs/acint\\_faculty\\_syllabus.php](http://deanofstudents.utexas.edu/sjs/acint_faculty_syllabus.php))

## Plagiarism

“Plagiarism” includes, but is not limited to, the appropriation of, buying, receiving as a gift, or obtaining by any means material that is attributable in whole or in part to another source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course requirement (from [Sec. 11-402](#)).

## Copyright and Fair Use

Understanding the basic principles of copyright and fair use is of critical importance to designers. Many of the uses we will make of texts, images, and videos this semester will be covered by the doctrine of fair use. However, as creators, you need to be aware of your own and other copyright holders’ legal rights, and to properly identify and license your own and others’ works. A useful resource is Copyright Crash Course, available at <https://guides.lib.utexas.edu/copyright>

## Student Support Services



There are numerous free and/or low-cost support services available to students at UT. They include (but are not limited to) the following:

**Fine Arts Career Services** (512-232-7333, [utexas.edu/finearts/careers](https://utexas.edu/finearts/careers)) provides a full range of services and resources to support students and alumni.

**The Undergraduate Writing Center** (512-471-6222, [uwc.utexas.edu](https://uwc.utexas.edu)) helps students with every phase of writing assignments for their courses.

**The Sanger Learning Center** (512-471-3614, [utexas.edu/ugs/slc](https://utexas.edu/ugs/slc)) provides study skills, time-management, and note-taking courses.

**University Health Services** (512-471-4955, [healthyhorns.utexas.edu](https://healthyhorns.utexas.edu)) provides medical and health promotion services for currently enrolled students and some non-students who are officially enrolled in certain University programs.

**The Counseling and Mental Health Center** (512-471-3515, [cmhc.utexas.edu](https://cmhc.utexas.edu)) helps students with their personal concerns so that they can meet the daily challenges of student life.

## 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(<https://titleix.utexas.edu/relevant-policies/>)

Beginning January 1, 2020, Texas Senate Bill 212 requires all employees of Texas universities, including faculty, report any information to the Title 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) must be reported.

I am a Responsible Employee and must report any Title IX related incidents that are disclosed in writing, discussion, or one-on-one. Before talking with me, or with any faculty or staff member about a Title IX related incident, be sure to ask whether they are a responsible employee. If you would like to speak with someone who can provide support or remedies without making an official report to the university, please email [advocate@austin.utexas.edu](mailto:advocate@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](mailto:titleix@austin.utexas.edu), or call 1-1512-471-0419.

## COVID Guidance

To help keep everyone at UT and in our community safe, it is critical that students report COVID-19 symptoms and testing, regardless of test results, to University Health Services, and faculty and staff report to the HealthPoint Occupational Health Program (OHP) as soon as possible. In addition, to help understand what to do if a fellow student in the class (or the instructor or TA) tests positive for COVID, see the University Health Services.

This course may be offered in a format to which you are unaccustomed. If you are looking for ideas and strategies to help you feel more comfortable participating in our class, please explore the resources available here: <https://onestop.utexas.edu/keep-learning/>

## COVID Academic Accommodations

### COVID-19 Pass/Fail Exceptions

For the fall 2020 and spring 2021 semesters, undergraduate students may choose to have a total of three (3) classes graded on a Pass/Fail basis without penalty. Beginning January 6, 2021 and continuing through May 28, 2021, undergraduate students may contact the College's Office of Student Affairs to request a COVID-19 Pass/Fail Exception for up to three (3) classes taken during the 2020-2021 academic year. It may be advisable to wait until after the spring semester so that you can make the best decision by optimizing your three conversions over both semesters. It is also important to keep in mind how classes taken with a grade of "P" (Pass) will be treated by graduate and professional school admissions, licensure requirements, and others. It is therefore recommended that you work with your advisor to make this decision, as changing a letter grade to Pass/Fail may have unintended consequences.

## Extended Q-Drop Deadlines

For the spring 2021 semester, all Q-drops will be considered “non-academic,” which allows students to drop a class without counting toward the six-class limit. The deadline for Extended Q-Drops is May 11.

If you are considering a Q-drop for any of your classes for Spring 2021, contact the Office of Student Affairs. There may be some conditions when a Q-drop is not available (e.g., students on probation). Additionally, Q-drops may have an impact on financial aid as well as other implications.

## FERPA

What is FERPA? FERPA, the Family Educational Rights and Privacy Act of 1974, is a federal law that pertains to the release of and access to educational records. The law, also known as the Buckley Amendment, applies to all schools that receive funds under an applicable program of the US Department of Education. Go to [www.ed.gov/policy/gen/guid/fpco](http://www.ed.gov/policy/gen/guid/fpco) to learn more.

To which information does FERPA apply? FERPA applies to personally identifiable information in educational records. This includes items such as the student's name, names of family members, addresses, personal identifiers such as social security numbers, and personal characteristics or other information that make the student's identity easily traceable.

What are educational records? Educational records are all records that contain information directly related to a student and are maintained by an educational agency or institution, or by a party acting on its behalf. A record means any information recorded in any way, including handwriting, print, tape, film, microfilm, microfiche, and digital images. »  
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Educational records do not include the following:

- sole possession records -- records kept in the sole possession of the maker which are used only as a personal memory aid and are not accessible or reviewed by any other person except a temporary substitute for the maker of the record;
- medical or psychological treatment records that include those maintained by physicians, psychiatrists, and psychologists;
- employment records, provided that employment is not contingent upon being a student;
- law enforcement records; and
- records collected about an individual after that person is no longer a student at UT Austin

More information about FERPA: <https://registrar.utexas.edu/staff/ferpa>

## AET Cloud Services Policy

### What is a cloud service?

A cloud service is any software system that requires internet access to run or passes data between an end user's computing device and network resources owned or managed by a third party. The university maintains policies about the use of cloud services. Common cloud services include Gmail (or UTMail), Office 365/OneDrive, Adobe Creative Cloud, Zoom, Slack, Discord, Google Drive, Trello, Airtable, as well as Canvas, Box, Mural, and many others. Services like these can enhance the learning experience for faculty and students, and may be central to modern forms of academic and industrial practice.

### Department Usage Policy

As a technology focused program offering a professional degree, AET often integrates cloud services into course objectives, communication, and other learning experiences. While some of these services have documentation that indicates their compliance with data protection and privacy standards such as FERPA, many do not have such documentation. AET faculty and students **MUST NOT** share FERPA protected data such as grades, discipline, or personally identifying information (not considered directory information) for any reason on any cloud services, except those approved by the university.

## UT Electronic Mail Notification Policy



Electronic mail (e-mail) is a mechanism for official University and instructor communication to students. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University- and course-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.

It is the responsibility of every student to keep the University and instructor informed of [changes in their official e-mail address](#). Consequently, e-mail returned with "User Unknown" is not an acceptable excuse for missed communication. Similarly, undeliverable messages returned because of a full inbox or use of a spam filter will be considered delivered without further action required of the University or instructor. (see [e-mail notification policy](#))

## Use of Class Materials

The materials used in this class, including, but not limited to, exams, quizzes, and homework assignments are copyright protected works. Any unauthorized copying of the class materials is a violation of federal law and may result in disciplinary actions being taken against the student. Additionally, the sharing of class materials without the specific, express approval of the instructor may be a violation of the University's Student Honor Code and an act of academic dishonesty, which could result in further disciplinary action. This includes, among other things, uploading class materials to websites for the purpose of sharing those materials with other current or future students. For more information, go to:

<https://wikis.utexas.edu/display/coursematerials/Management+of+Course+Materials%3A+Copyrights+and+Class+Recordings>

## Indigenous Land Acknowledgment

We acknowledge that the University sits on indigenous land. The Tonkawa lived in central Texas and the Comanche and Apache moved through this area. Today, various indigenous peoples from all over the globe visit Austin and/or call it home. We are grateful to be able to study and learn on this piece of Turtle Island. Since some of our classes are online, you may be contributing from other tribal lands. Here is a map that may help you in identifying the indigenous peoples of the land on which you study:

<https://native-land.ca/>

## Professor Bio

MJ Johns (they/them) is an Assistant Professor of Practice in the Department of Arts and Entertainment Technologies, Assistant Department Chair, and Honors Advisor. MJ has worked in game design and development studios ranging from small start-ups to larger AAA teams, with roles including Level Designer, Game Scripter, Prototyper, UX Designer, Researcher, and 3D Artist / Animator. They have experience with a variety of technology including mobile, PC, web, VR, and AR. MJ's AAA credits include Call of Duty: Modern Warfare Remastered and Mafia III.

In addition to teaching Game Design, MJ also runs their own independent game studio Astire Games developing and publishing mobile and web games, including recent releases Spell Sigil and Cosmos Arena.



*You did it! Thanks for reading the syllabus!*