Michael Baker (T/R) michael.baker@austin.utexas.edu **Office: DFA 4.112 Wednesday 10a-12p** **Fall 2018**
David (D.S.) Cohen (M/W) ds.cohen@austin.utexas.edu

AET 318 FOUNDATIONS OF GAMES & PLAYABLE APPS

Course Sections

Instructor	TA	UID	Meeting Times	Room
Baker	Jessica Chambers	20894	T/R 12:30 - 2p	DFA 4.106
Cohen	Alex Iveroth	20890	M/W 2 - 3:30P	DFA 4.112

Abstract

From the catalog: Introduction to concepts of game play, game narrative, user-interaction, modeling, and animation. Historical examination of game genres, systems, and games from a cultural and gender perspective.

Objective

Learn the fundamentals of design for the screen based interactive medium of video games.

Assessment

This course is project based. There will be no exams. Grading is based on successful completion of project objectives. Assignments are worth 60%, the final project is worth 30%, and the remaining 10% of the final grade is based on professionalism which is earned by attending class during the scheduled meeting times and conducting oneself in a professional manner.

No late work will be accepted. No incompletes will be given. If you feel you will not be able to complete all work on time, you should ask the instructor for a grade of Q or drop before the deadline for doing so passes.

Note: If you catch the flu, get a flat tire, or otherwise cannot attend class, please send an email and attach any class work as needed.

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 at any stage. Thus a B- will be inclusive of all scores of 80.000 through 83.999. The University does not recognize the grade of A+.

Letter grade equivalents:

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

File Format:
Presentations, docs, spreadsheets, flowcharts, concept art, etc. File Format: PDF;
Game Builds – File Format: Executable file (.exe)

File Naming Convention: If submitting as an individual...

Firstname_Lastname_AssignmentName_Numeric DateSubmitted
Example: cohend_conceptpitch_07042018

If submitting as a team...**TeamName_AssignmentName_DateSubmitted**
Example: cohend_conceptpitch_07042018

IMPORTANT: Do not use slashes (/) in the date, as the system will not accept it and it may not read correctly.

Classroom Policy

Devices

- Must be kept in silent mode unless an emergency notification is expected (please discuss this with me prior to class).
- Can be used for research and class note taking, but not for social media (unless related to class activities)

Food/Drink

- Food is not allowed in class.
- Drinks in closed containers are permitted but must be kept on the floor or out of sight when not in use.

Required Equipment

All students MUST have access to a portable computer capable of running the Unity game engine. Either Mac or PC is fine.

Calendar

Note – This is outline, assignments, and reading are subject to change by the instructor, without notification in certain cases.

1 8/29	Course Intro **HW**: I Have No Words and I Must Design	Project 1: Exploration & Documentation
2 9/3	9/3 Labor Day - No Class	
	9/4 No Class	
	Design kits, Possibility Space. Intro to Explorational Game Design. **HW**: Create 3 challenges using your design kit and create one page play instructions with diagrams.	
3 9/10	Playtesting **HW:** Document the design	

	in class: design three additional challenges based on another students' design. **HW:** Finalize challenges and documentation (DD and instructions),	
4 9/17	Postmortem discussion **Due next class**: Write and submit postmortem	Project 1: Exploration --- Project 2: Exploration
	Design Reboot - Explorational Game Design **HW**: A Theory of Fun for Game Design Chapters 1 - 4. Learn Unity basics. https://goo.gl/vwmnm6	
5 9/24	Lecture/Discussion - Mechanics, Dynamics. Intro to Project 2 **HW:** Begin Project 2	Project 2: Exploration
	LAB **HW:** Continue developing Project 2	
6 10/1	Playtesting	
	PROJECT 2 DUE **HW:** Art of Game Design Chapter 7	
7 10/8	Lecture/Discussion -. Intro to Project 3 **HW:** Begin Project 3	Project 3: Exploration
	LAB **HW:** Continue developing Project 3	
8 10/15	Playtesting	
	PROJECT 3 DUE HW: Art of Game Design Ch 8, Design of Everyday Things Ch 4	
9 10/22	Lecture/Discussion - Intro to Project 4	Project 4: Exploration
	LAB **HW:** Continue developing Project 4	
10 10/29	Playtesting	
	PROJECT 4 DUE **HW**: Art of Game Design Chapter 5	
11 11/5	Lecture/Discussion - Level design. Intro to Project 5. Theme Jam!! HW: Mood Board, 3 themes (NO FAN ART OR MEMES!), pick one.	Project 5: Theme
	LAB - Theme check in HW: Begin Integration	
12 11/12	LAB/Check-in Playtesting	
	LAB/Check-in Playtesting	
13 11/19	LAB/Check-in Playtesting	
	Thanksgiving (No Class)	

14 11/26	Pitch documents. Postmortem. HW: Create pitch doc	Project 6: Final
	Pitch docs review	
15 12/3	LAB/Playtesting	
	LAB/Playtesting. Postmortem.	
16 12/10	**12/10 (Last day before finals)** **FINAL DUE**	

Units of Study

1. **Explorational Game Design**
    - Use explorational game design techniques to discover gameplay and create interesting play opportunities.
2. **Elements of Game Design**
    - Readings and discussion of important design topics
    - Theme development and content considerations.
3. **Level Design Fundamentals**
    - Prerequisites for engaging in level design.
    - Creating meaningful play.

Process

Students will work individually using explorational game design techniques to discover play opportunities within interactive systems, develop theme, and create level design.

Projects 1 - 4: Explorational Game Design

Utilize Explorational Game Design[1] techniques to create 3 different challenges based on discovered gameplay opportunities in the provided starter materials. It's CRITICAL that NO additional content be added, however duplication/modification of the starter assets/systems is allowed - provided functionality is NOT significantly changed and visual changes are limited to primitive shapes and colors. These constraints are essential to the process.

Projects which contain superimposed, significantly modified, or additional content will receive a grade of 0. DO NOT under any circumstances add representational or thematic content. No Exceptions.

Project 5: Theme and Story

Choose one of the previous 3 projects and develop a theme and/or story which aligns with discovered gameplay. Begin integrating themed assets into the project.

Project 6: What is Level Design?

Design a sequence of 5 levels which plot some type of progression. Progression can be based on difficulty, story, theme, etc. Consider using challenges or obstacles to create this sequence. Create a successful build which starts with level 1 and allows the player to progress to level 5. The levels should be playable by anyone in the class with minimal practice. In other words, the levels should not be too difficult to complete.

Project 7: Final

Integrate final themed assets and refine/balance gameplay. Students are encouraged to create their own themed assets, but purchased asset kits may also be used. As with Project 6, the final must function as a playable build which starts at level 1 and ends with level 5. A starting menu screen is optional.

[1] https://goo.gl/DWB5jP, Design Reboot, Jonathan Blow (2007)

Requirements:

- Submit final executable on itch.io
- Final hi res images and breakdown on ArtStation showing workflow breakdown and explaining each step in your process from concept to completion.
- Pitch doc
- Postmortem
- Submit zip file to Canvas containing:
    - Final executable
    - Final images and breakdown
    - Links to itch.io and ArtStation
    - Pitch doc and postmortem

Elements of Game Design

- ***Possibility Space* (Will Wright, 2006):**
    - A conceptual region which defines the range of possible player activities within a game.
    - https://goo.gl/7n55Qn, *Dream Machines*, Will Wright (2006)

- ***Kinesthetics***:
    - The sensation of movement of one's physical body. This is related to proprioception which describes the sensation of position and orientation of limbs and muscle strain. When considered in the context of the rapid feedback loops in screen based games, Kinesthetics is perhaps THE primary characteristic which defines videogames as a unique medium.
    - https://goo.gl/HLjKWY, *Kinaesthetics*, Errant Signal (2012)

- ***Explorational Game Design*:**
    - Also known as Forward Game Design[2] and related to emergent gameplay, this idea was introduced by Jonathan Blow in his GDC 2007 talk Design Reboot. Explorational Game Design (EGD) can be viewed as a "bottom up" approach to designing play systems in that the process requires designers to develop their "listening" skills in order to discover the latent play possibilities within interaction mechanics. This is contrasted with the more traditional "top down" approach (referred to as architected design by Blow) which subverts all development in service of a design document. Explorational Game Design is generally a more reliable means of creating meaningful play experiences as thinking through the play possibilities of a dynamic interactive system is nearly impossible for most humans.
    - https://goo.gl/DWB5jP, *Design Reboot*, Jonathan Blow (2007)
    - https://goo.gl/oKuL5s, *Today I'm Going to Design an Ernesto Boss*, Daniel Benmergui (2014)

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- ***Endogenous Meaning:***
    - Proceeding from within; derived internally. A game's structure creates its own meanings. Explorational and Forward Design techniques seek to discover the endogenous meaning of interactive systems.
    - https://goo.gl/fjHgwY, *I Have No Words and I Must Design*, Costikyan (1994),

- ***Mechanics*:**
    - Discrete actions which change the state of the game world. Players and Non-player agents interact with mechanics during play. e.g. jump, move, collect, shoot, score.

- ***Dynamics*:**
    - Sometimes referred to as emergent gameplay, dynamics are the result of mechanics combined through play. e.g. move and jump are combined to create platformer gameplay.

- ***Aesthetics:***
    - The "content" of games which exists in the realm of emotion and sensation. In an applied sense, aesthetics can refer to any and all of the following: visual design, story, play systems, values, endogeny, ludonarrative meaning, and any other content not easily defined as mechanics, dynamics, or play systems.

- ***Game Feel/Juice*:**
    - The intangible yet essential quality of a gameplay experience which defines the "feel" of interaction. Closely related to the harmony between kinesthetics and audiovisual feedback, Game Feel or Juice is essential for engagement, especially for action games.
    - https://goo.gl/BSLHMx, *Secrets of Game Feel and Juice*, Mark Brown (2015)

- **Rewards:**
    - Symbolic tokens which mark progress in games. ***Intrinsic*** rewards occur in the player's brain in the form of chemical releases associated with pattern recognition and problem solving. ***Extrinsic*** rewards are given to the player by the game. They have no value outside the context of the game systems. The simplest type of extrinsic reward is the schedule reward, which is a token given to the player when a clearly defined task is completed.

- ***Ludonarrative and Ludonarrative Dissonance***
    - Ludonarrative is the "story" generated through play. In open world games, this story is unique to the each player as their decisions during play determine a course of events. In story driven games or those with a distinct imposed narrative, play is often limited and serves only to unlock the next part of a predetermined sequence. Ludonarrative Dissonance is said to occur when a game's narrative and its play systems conflict. i.e. when a game's systems permit only actions which conflict with the in-game story. The

term originated in a game criticism context by Clint Hocking. Some designers view Ludonarrative Dissonance as a tool.
    - https://goo.gl/4X4VFN, *The Debate That Never Took Place*, Errant Signal (2015)
    - https://goo.gl/uk65TJ, *Ludonarrative Dissonance in Bioshock*, Hocking (2007)

- **Flow**:
    - Defined by Mihaly Csikszentmihalyi (Meehai, Chik-sent-meehai) in 1975. Flow is the mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity. In game design, the "flow channel" is a conceptual model which defines a region in which players enjoy maximum engagement while completing tasks of increasing difficulty.

- ***LeBlanc's Taxonomy***:
    - Aesthetics defined in the MDA framework as an attempt to more precisely describe "fun" and "gameplay". The taxonomy includes: Sensation, Fantasy, Narrative, Challenge, Fellowship, Discovery, Expression, and Submission; and is intended as recombinant utility for analyzing game content.
    - https://goo.gl/32LeXX, *MDA: A Formal Approach to Game Design and Game Research*, Hunicke, LeBlanc, Zubek (2004)

- ***Bartle Types***:
    - A classification of player types in terms of play motivation: Killers, Achievers, Explorers, and Socializers. Later Bartle mapped the types on 2 axes relative to play goals: Acting - Interacting, and Players - World. The Bartle types are often misinterpreted as describing a player's single motivation, while in reality players may engage in each of the four types (or many more) at different times during a play session.
    - https://goo.gl/X2gyBf, *Hearts, Clubs, Diamonds, Spades: Players Who suit MUDs,* Richard Bartle (1996)

- **Affordance**
    - (James Gibson 1977): A relation between and object and organism. Affordances are the "action possibilities" latent in the environment which are dependent on an agent's capabilities. e.g. a door knob or teacup handle. As a design tool, affordances can be used to create play depth or by extension, suggest player actions, or manipulate players expectations.
    - J. J. Gibson (1966). *The Senses Considered as Perceptual Systems*. Allen and Unwin, London.

Designing Play Experience

Video games are interactive screen based experiences.

Their systems are dynamically manipulated by players and provide a high speed continuous feedback loop - these are THE distinguishing features of the medium which set it apart from tabletop games, sports, and other screen based media.

Games should be FUN.

This oft invoked phrase represents a misunderstanding of why videogames are compelling. Evidence suggests that player engagement is directly correlated with chosen meaningful work[3] - the results of which can foster a sense of accomplishment, reward, awe, surprise, joy, appreciation, delight, content, or satisfaction to name a few.

When exploring a game idea, use the following list to develop the play experience:

- Screen based interactive experiences such as videogames function like a ***conversation***. The player “speaks” through the controls and inputs, and the game “replies” by updating the game state.
- ***Engagement*** (a.k.a Fun) results from pattern recognition (***learning***), decision making (***strategy***), and problem solving (***feedback***).
- Games ***teach*** by exposing ***patterns*** and providing feedback to the player.
- Players learn by employing strategy and ***interacting*** with the game world.
- Strategy (or ***informed decision making***) is only possible in the presence of clear patterns and feedback.
- ***Obstacles*** are learning opportunities which advance the player's knowledge and understanding of the game world.
- ***Challenges*** are reinforcement opportunities which confirm/expand the player’s knowledge of game systems.
- ***Intrinsic*** and ***extrinsic rewards*** mark player progress.
- Players are generally motivated by ***meaningful play (or work)***, which manifests in different forms at different times. Some of these are: skill mastery, social connection, exploration, story, achievement, reward, collection, fantasy, challenge, discovery, expression, fellowship, competition, distraction, culture, and many others scattered across the wide spectrum of human drive and desire.
- The relationship between ***theme***, ***narrative***, and ***play*** systems should be clear and symbiotic - even if in an unexpected way.

[3] https://goo.gl/TSP7iJ, *Reality is Broken*, Jane MacGonigal (2010)

Class Attendance Policy

As detailed above, attending class during the scheduled meeting times earns professionalism credit. Credit is NOT earned for arriving late, leaving early, or failing to attend class meetings. If attending a scheduled class meeting is not possible, students are expected to promptly notify the instructor of extenuating circumstances.

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."

University Attendance Policy: Religious Holy Days

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to 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, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

Documented Disability Statement

Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities (SSD) at (512) 471-6259 (voice) or 1-866-329-3986 (video phone). Faculty are not required to provide accommodations without an official accommodation letter from SSD. academic honesty 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.

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.

Emergency Evacuation Policy

Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation: • Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building. • If you require assistance to evacuate, inform me in writing during the first week of class. • In the event of an evacuation, follow my instructions or those of class instructors. Do not re-enter a building unless you're

given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.

NOTES

Expanded terminology - integration into play test forms

- Was the core gameplay loop clear?