## **Creating Games** ART & CS 107 Spring 2013 Schedule

Revised April 24, 2013; the schedule adapts to your interests and ideas throughout the semester.

Morning:	$\mathrm{TR}$	8:30 - 9:45 am	Hyperlinks are underlined. Chapter
Afternoon:	Thu.	$1-4 \mathrm{pm}$	reading is in McGuire and Jenkins,
Office hours: (TCL 308)	By appointment		$\underline{Creating \ Games}$ , A K Peters 2008 +
(I'm generally accessible–let me know when is best for you)			errata
TA hours:	See website		

"Homework" is independent work due at the beginning of the following class session. I encourage you to discuss ideas with other students but your work product should solely be your own. When a written response is appropriate, note that scholarly writing includes citations to primary sources, terse style, appropriate vocabulary and tone, and proper English style. The writing center and my office hours are great resources to improve your writing.

"Read" and "Play" material has no specific deadline, but should be done close to that day so that we have a common base for discussion. For games, spend at least two hours in actual gameplay, and try to play with other students in the class. Having played a game (i.e., a social and intellectual activity) with someone will help you to know if you can work together effectively on a project. Unless explicitly noted, you are welcome to play a game on a different (equivalent) platform or with your own copy instead of using the library resource. If you make a reasonable attempt to play a game and it is not available, then you can substitute a different game listed on the course web page. Reading, games, and films in parentheses are recommended if you want to learn more about a topic but are not required. These may elevate the quality and insight of your work.

"Projects" are for teams, all members of which will receive the same grade. Working together effectively is one of our educational goals. Remember to step back and ensure that you and your peers are learning that as well as producing a physical artifact during the project. Bring me and the TAs into the process of managing your team and making decisions.

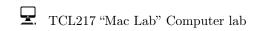
All written work must be typed (tip: save your files–I may ask you to revise them). For fairness to your peers, all non-programming work is due in hardcopy at the beginning of the class session in which it is due. There are no extensions-late work will not be accepted.

Two kinds of assignments are not listed on the schedule explicitly. The first kind includes in-class activities for which you will submit some artifact for a grade at the end of class. This is in lieu of having an equivalent assignment as homework and is intended to reduce your out-of-class workload. The second kind of assignment is a 3-minute independent presentation on a researched topic of your choice, which everyone in the class must give once. I will post a link to an online signup sheet and the TAs will give sample presentations at the beginning of the semester. Plan to spend about six hours researching your topic. Any of the recommended reading or games would be great topics. Be sure to speak to me at least a week ahead of time about your topic, before you begin significant preparation, so that I can provide feedback and suggest resources.

This course uses four rooms, plus office hours in TCL308 and appointments in the Graphics lab. This gives us the best facility for each topic. Icons on the schedule tell you where to go each day:



The Rose Gallery at WCMA



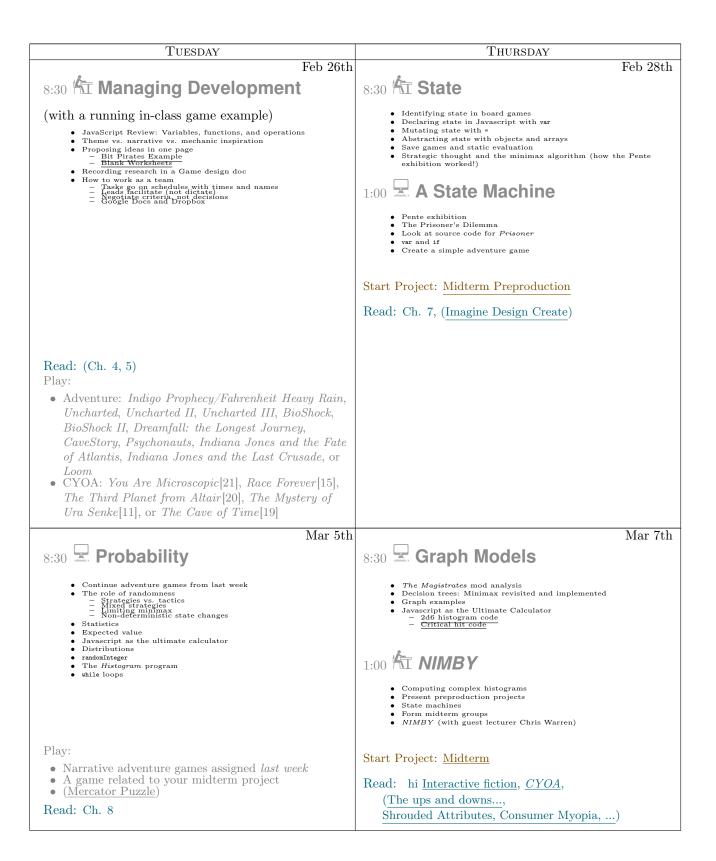
TCL206 Classroom

SS The Science Shop in Bronfman

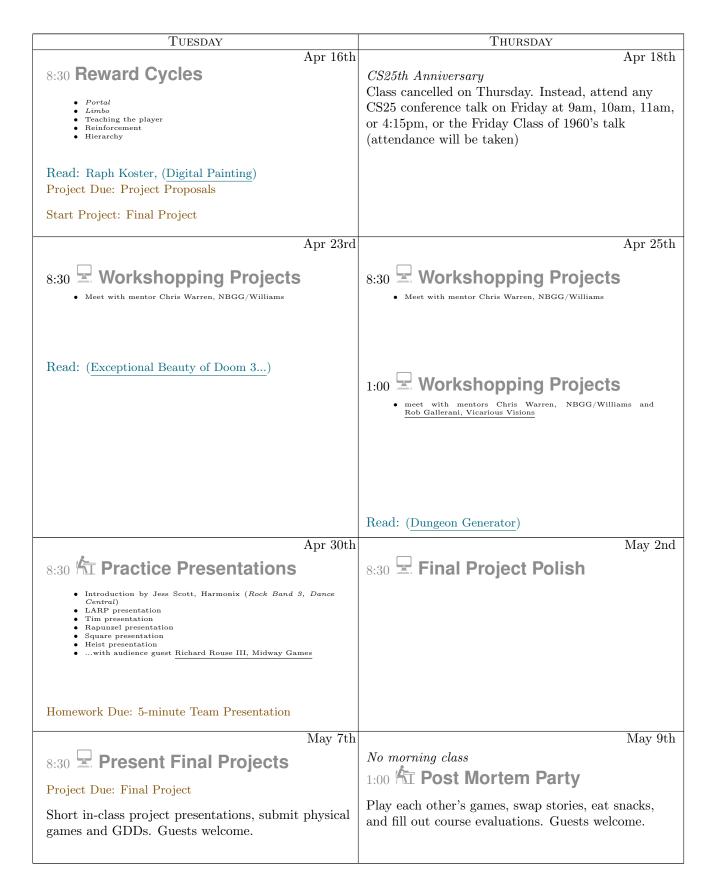
To foster effective discussions, I split the class into "red" and "black" sections of 12 students each. Only attend the sessions with your section color. Everyone should attend sessions with gray titles and icons. You can switch sections at any time.

TUESDAY	THURSDAY
	Jan 31st
	(Class meets Wed. Jan 30)
	8:30 <b>AT Settlers of Catan</b>
	<ul> <li>Every creator has 1024 bad creations in him or her</li> <li>An aperture on games</li> </ul>
	<ul> <li>Content, mechanics, and technology</li> <li>State and rules</li> <li>Objective aestificies</li> <li>Brt is communication</li> <li>Frocess vs. product / Taste vs. skill</li> </ul>
	Settlers of Catan 27
	<ul> <li>How do you make decisions?</li> <li>What are the elements of the game?</li> <li>How was this manufactured?</li> <li>Final projects from last year</li> </ul>
	<ul> <li>Structure of the course</li> <li>Responsible for your own learning</li> <li>Activity and project focused; some projects include pre-</li> </ul>
	senting – Iterative structure – Mini-lectures, ment Team projects, individual homework, 3- – minuta solo presentations.
	<ul> <li>minute solo presentation</li> <li>Most reading is recommended, not required</li> <li>C = Below expectation; B = Satisfies assignment; A = Exceptional insight (≠ effort)</li> </ul>
	1:00 Review Braid and XCOM
	<ul> <li>Braid[2] and XCOM[10] demos</li> <li>Bookmark the course and codeheart.js websites</li> <li>Download Paddle</li> <li>Change the colors</li> <li>Deploy on web and iPad</li> <li>Change the controls</li> <li>Make the ball move slower</li> <li>3:30pm: View INNOVATE W'13 game jam results</li> </ul>
	(Optional: 3D printer talk in TCL 206 3:30pm Fri.) Read: Preface, Schedule, Website Syllabus, <u>CS Honor Code</u>
	Start Project: <u>Content Mod</u>
	<ul> <li>Play:</li> <li>The Settlers of Catan[27]; if you're very familiar with it, then play Puerto Rico[23] or Power Grid[9]</li> </ul>
Feb 5th	Feb 7th
8:30 🛱 Synthesize a Board Game	8:30 <b>T Indie Game: The Movie</b>
<ul> <li>Design a board game</li> <li>Design a game under constraints</li> <li>What is a game?</li> <li>Description design</li> </ul>	<ul> <li>iPads available from ELC for this class, some games (including yours) on iOS</li> <li>Screen selection of <i>Indie Game</i> [26]</li> </ul>
• Documenting design	1:00 <b>Analyze a Game</b>
Read: (Ch. 1)	<ul> <li>(cont. from Tuesday: game proposal form)</li> <li>Analyze Settlers</li> </ul>
Project Due: Content Mod	<ul> <li>State (nouns) and rules (verbs)</li> <li>Variables and functions</li> <li>Commodity flow</li> </ul>
Play:	Mathematics     Logic
<ul> <li>Physical puzzles: RushHour[32, 28], Safari RushHour[30], or TipOver[29] [library]</li> <li>Constraint puzzles: Minesweeper, Picross,</li> </ul>	2:30 - Photoshop and Pages
Mastermind, Sudoku, or KenKen [online/paper]	• Sample presentation by Erica
• (optional video puzzle games: Portal, Portal 2, Quantum Conundrum, Limbo, or Braid [by appointment])	<ul> <li>Design language</li> <li>Font, color, aspect, justification, alignment</li> <li>Exactly reproduce a page from a game's instruction manual</li> <li>(You can download Office, iWork, and Photoshop for free for your own computer from OIT!)</li> </ul>
	Read: Ch. 2 Homework: Complete the 1-page reproduction
	Start Project: Create something related to games: e.g., modified video or board game, new game, picture, analysis, interactive play or story, essay. Any team size. Have fun!

TUESDAY	THURSDAY
Feb 12th	
8:30 Composition	8:30 <b>T Puzzles</b>
Bring PENCIL and something hard to write and draw against as we walk through the galleries. Gallery tour Free sketching exercise in Picture Literature Gallery Review 2D composition tools — Araming and the rule of thirds — Propertion and visual lines — Aspace — Aspace — Sketching Ranch House, Santa Fe Works used in this lesson	<ul> <li>Guest lecturer: Duane Bailey</li> <li>Mechanical puzzles</li> <li>Crossword puzzles</li> <li>Sudoku</li> <li>Tentaizu and Hitori</li> <li>River Crossing</li> <li>Red/black suit assignments</li> <li>Theseus &amp; That Pesky Minotaur</li> <li>Programming</li> <li>1:00</li> </ul>
Read: (Ch. 12, <u>My First New Yorker Cover</u> , <u>Disney Goes Retro</u> , <u>https://fbcdn-sphotos-a-a.akamaihd.net/hphotos-ak-as</u> <u>How many tweets?</u> ) Homework: Sketch	<ul> <li>Add a feature to Pong prototype: e.g., 2nd player, blocks, win/lose condition, 2nd ball</li> <li>Create a splash screen in Photoshop</li> <li>Add sounds by mimicking other games and reading documentation</li> <li>2:30 SS The Science Shop</li> <li>h4/287299 563556910323351 1872533864 o.jpg,</li> <li>Mate a specific custom die in a team of four using a 3D printer, milling machine, or laser cutter</li> </ul>
<ul> <li>Play:</li> <li>Video games: Mirror's Edge[7], Uncharted[16], Uncharted 2[17], Uncharted 3[18], Bastion[25], Okami[5, 6], LittleBigPlanet[13], LittleBigPlanet 2[14], Fable III[12], or BioShock 2[1]</li> <li>Board games: Shadows Over Camelot, Through the Desert, or RoboRally</li> <li>(clickmazes)</li> </ul>	<ul> <li>1:00 SS The Science Shop</li> <li>2:30 Programming</li> <li>Project Due: Create Something</li> <li>Start Project: <u>Puzzle Game Level</u> (N.B. Honor Code)</li> <li>Read: (Ch. 3, Autodesk Moldflow 2010 [video])</li> </ul>
Feb 19th	Feb 21st
8:30 Font & Palette	8:30 <b>Tominion</b>
<ul> <li>In static media</li> <li>Examples on game boxes, instructions, video games, etc.</li> <li>In board and video games</li> <li>Color theory <ul> <li>EM spectrum</li> <li>Color constancy</li> <li>Analyzing paletters w/ Photoshop</li> </ul> </li> <li>Morks used in this lesson</li> <li>8:30 Constancy</li> <li>Morks used in this lesson</li> <li>8:30 Constancy</li> <li>Morks used in this lesson</li> <li>8:30 Constancy</li> <li>Morks used in this lesson</li> </ul> <li>8:30 Constancy</li> <li>Morks used in this lesson</li> <li>8:30 Constancy</li> <li>Morks used in this lesson</li> <li>8:30 Constancy</li> <li>Minimax games: Citadels[8], YINSH[4], or Flash Duel[24]</li> <li>Worker placement: Carcassonne[31], Stone Age[3], Puerto Rico[23], or Agricola[22]</li> <li>(Hero Academy)</li>	<ul> <li>8:30 Solve Font &amp; Palette</li> <li>1:00 Control Cont</li></ul>



TUESDAY	THURSDAY
Mar 12th	Mar 14th
<ul> <li>8:30 Tic-Tac-Toe</li> <li>Review Javascript: <ul> <li>- var declares state</li> <li>- ir makes conditional rules</li> <li>- ir makes conditional rules</li> <li>- Anays group rules</li> </ul> </li> <li>Implement Tic-Tac-Toe (Naughts and Crosses) in Javascript</li> </ul>	<ul> <li>8:30 Expression &amp; Violence</li> <li>8:30 Tic-Tac-Toe</li> <li>• Implement Tic-Tac-Toe (Naughts and Crosses) in Javascript</li> </ul>
8:30 Expression & Violence	
<ul> <li>Limbo</li> <li>TRAUMA</li> <li>God of War</li> <li>Dead Space</li> <li>Artwork discussed in class</li> </ul> Read: (Ch. 11, <u>Touching the Cord</u> )	1:00 Abstraction • Present midterm projects • Abstract state into objects • Abstract rules into functions • Define terms in English • Model complex systems in mechanics • Reduce details to make art easier to read • Minimax: recursion, abstraction, scope. Generic game player, not tic-tac-toe heuristics Read: (Complex dynamics in learning complicated games)
Spring Break	Spring Break
Spring Break	Spring Break
Apr 2nd	Apr 4th
<ul> <li>8:30 Carcassonne &amp; Mods</li> <li>Play:</li> <li>Osmos (free iOS demo recommended), Dungeons &amp; Dragons (any tabletop version), XCOM: Enemy Unknown (full game, or free demo on Steam or Xbox live), Munchkin (any version), Robo Rally – none of these are in the library</li> <li>Shadows Over Camelot, Battlestar Galactica, Lord of the Rings, Space Alert, Pandemic, or Space Hulk</li> <li>Read: Ch. 9, (Who Controls the World?, Pixel art tutorial, Alvin Roth and Lloyd Shapely)</li> </ul>	8:30 ARPG • "ARPG" genre • Lock and key mechanics • Modeling State and Computation • Example: Inventory • Example: Treasure Chest Read: Ch. 10 Homework: <u>ARPG Design</u>
Apr 9th	Apr 11th
8:30 Sex, Gender, & Perspective	<ul> <li>8:30 Sex, Gender, &amp; Perspective</li> <li>Catherine</li> <li>Bayonetta</li> <li>Tomb Raider</li> <li>Mass Effect 3</li> <li>Occlusion</li> <li>Perspective; orthographic, isometric, linear, multiple, geometry</li> <li>Fez</li> <li>Megakiure</li> </ul>
8:30 도 ARPG Implementation	8:30 🗷 ARPG Implementation
<ul> <li>Read: (Leigh Alexander Keynote [video], <u>MoMA Video Games Collection</u>, <u>Games are art</u>)</li> <li>Play:</li> <li>FlirtOff</li> <li>Portal 2, Super Meat Boy, Limbo, or Super Mario Galaxy</li> </ul>	1:00 <b>Continue Adventure Games</b> • Philippe & Erica in Lab
Dominion	Start Project: <u>Final Project</u>



## References

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- [5] Clover Studio. Okami. Capcom, April 2006. PS2, ESRB Teen.

- [6] Clover Studio. Okami. Capcom, April 2008. Wii, ESRB Teen.
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- [10] Firaxis Games. XCOM: Enemy Unknown. 2K Games, October 2012. ESRB M, Microsoft Windows.
- [11] Shannon Gilligan. The Mystery of Ura Senke. Chooseco, 1985. CYOA.
- [12] Lionhead Studios. Fable 3. Microsoft Game Studios, October 2010. Xbox 360, Windows, ESRB Mature.
- [13] Media Molecule. LittleBigPlanet. Sony Computer Entertainment Europe, October 2008. PS3, ESRB Everyone.
- [14] Media Molecule. LittleBigPlanet 2. Sony Computer Entertainment Europe, January 2011. PS3, ESRB Everyone.
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- [18] Naughty Dog. Uncharted 3: Drake's Deception. Sony Computer Entertainment America, November 2011. PS3, ESRB Teen.
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- [20] Edward Packard. The Third Planet from Altair. Bantam, 1979. CYOA.
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- [23] A. Seyfarth and Ravensburger Spieleverlag. Puerto Rico. Rio Grande Games, 2002. board game, 12+, 90-150 minutes, 3-5 players.
- [24] David Sirlin. Flash Duel 2nd Edition. Sirlin Games, 2011. board/card, 5 minutes, 1-5 players.
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- [26] James Swirsky and Lisanne Pajot. Indie Game: The Movie. January 2012. documentary film.
- [27] Klaus Teuber. The Settlers of Catan. Mayfair, 1995. board game.
- [28] ThinkFun. Rush Hour. ThinkFun / Apple, 1996. iOS.
- [29] ThinkFun. TipOver. ThinkFun, circa 2006. puzzle.
- [30] ThinkFun. Rush Hour. ThinkFun, circa 2010. puzzle.
- [31] Klaus-Juergen Wrede. Carcassonne. Rio Grande Games, 2008. tile & worker placement board game, 45 min/player, 2-5 players.
- [32] Nob Yoshigahara. Rush Hour. ThinkFun, 1996. puzzle.