

Creating Games

ART & CS 107 Spring 2012 Schedule

Revised April 16, 2012; the schedule adapts to your interests and ideas throughout the semester.

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| Morning: | TR 8:30 – 9:45am | Hyperlinks underlined. Chapter reading is in McGuire and Jenkins, <i>Creating Games</i> , A K Peters 2008. |
| Afternoon: | Thu. 1 – 4 pm | |
| Office hours: (TCL 308) | Tues. 11 am – 12 pm; 1–2 pm (I'm generally accessible—let me know when is best for you) | |
| TA hours: | Mon. 7–10 pm; Wed 8–10 pm | |

“**Homework**” is independent work. I encourage you to discuss ideas with other students but your writing should solely be your own. Homework **numbers** are chapter.section.question numbers. Produce scholarly work, but be brief and don't spend a huge amount of time. A homework **essay** is a one-page scholarly discussion of some aspect of a published game. The format is flexible; if lists, diagrams, equations, pictures, or a longer or shorter discussion suits your points, then employ them. I recommend writing your essay on one of the games assigned that week and topics addressed in class. 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 so that you get to know each other and share resources. 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 at the library, then you can substitute a different game listed on the course web page (that is, just take out some other game from the library instead of nothing at all).

“**Projects**” are for assigned 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.

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.



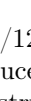





This class uses four rooms, plus office hours in TCL308. This gives us the best facility for each topic. Icons on the schedule tell you where to go each day:

- | | |
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| The Rose Gallery at WCMA TCL206 Classroom | TCL217 “Mac Lab” Computer lab Computer Lab in Schow Library |
|--|--|

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. Just make sure that you don't miss a topic.

| TUESDAY | THURSDAY |
|--|---|
| <p style="text-align: right;">Jan 31st</p> <p><i>Wed. Feb 1, Thursday Schedule</i></p> <p>8:30 Introduction</p> <ul style="list-style-type: none"> • Minigame exercise • What is a game? • Content, mechanics, and technology • Course policies & scholarly conduct <hr/> <p>1:00 The Settlers of Catan</p> <ul style="list-style-type: none"> • Divide into sections • <i>The Settlers of Catan</i> • How do you make decisions? • What are the elements of the game? • How was this manufactured? <p>Read: Ch. 2</p> <p>Play:</p> <ul style="list-style-type: none"> • <i>The Settlers of Catan</i> (board); if you're very familiar with it, then play <i>Puerto Rico</i> (board) or <i>Power Grid</i> (board) | <p><i>Claiming Williams Day</i></p> <p><i>No Class</i></p> |
| <p style="text-align: right;">Feb 7th</p> <p>8:30 Perception¹</p> <p>Homework Due: 2.7.{1, 3, 4, 7, 8}, essay on one game</p> <ul style="list-style-type: none"> • Drawing is Seeing <ul style="list-style-type: none"> – Sketching composition exercise • 2D composition tools <ul style="list-style-type: none"> – Motion > silhouette > value > color – Framing and the rule of thirds – Opposition and visual lines – Negative space – Aspect • Design Language <ul style="list-style-type: none"> – Font characteristics – Palette – Shape grammar • Sketch homework handout <p>(WCMA List, Other Materials)</p> <p>8:30 LibraryQuest</p> <p>Answer research questions about important and obscure game facts. I don't know the answer to many of these, but would like to!</p> <p>Read: Ch. 3</p> <p>Play:</p> <ul style="list-style-type: none"> • <i>YINSH</i> (board), <i>Chinese Checkers</i> (board), <i>Equate</i> (board), or <i>UNO</i> (card) • <i>Uncharted 2</i> (PS3), <i>Bioshock 2</i> (Xbox 360), or <i>Batman Arkham Asylum</i> (Xbox 360) | <p style="text-align: right;">Feb 9th</p> <p>8:30 LibraryQuest</p> <p>8:30 Perception</p> <hr/> <p>1:00 Creating Images</p> <ul style="list-style-type: none"> • Drawing is seeing • <i>Dominion</i> • Selecting palettes • Analyzing games w/ Photoshop • Start <u>Design Language</u> (a.k.a. Content Mod) project |
| <p style="text-align: right;">Feb 14th</p> <p>8:30 Color</p> <p>Homework Due: 3.9.{2, 3, 8}, 11.5.{1, 6}; Three sketches</p> <ul style="list-style-type: none"> • How to work as a team <ul style="list-style-type: none"> – Tasks go on schedules with names, not on lists – Leads facilitate (not dictate) – Negotiate criteria, not decisions – Google Docs and Dropbox • EM spectrum • Human retina • Color constancy • Color wheels • Color theory <ul style="list-style-type: none"> – Add color last – Analogous or split-complementary are the safest schemes – Vary saturation for style and value for semantics <p>Read: Ch. 12</p> <p>Play:</p> <ul style="list-style-type: none"> • <i>Indigo Prophecy/Fahrenheit</i> (PS2/PC), <i>Heavy Rain</i> (PS3), or <i>Braid</i> (Xbox360/PC/Mac) [you can play tag-team with several people, handing off the controller; I also have Indigo Prophecy and Braid in my lab by appointment] • <i>FlirtOff</i> (web), <i>Osmosis</i> (iOS), • <i>Dominion</i> (card) | <p style="text-align: right;">Feb 16th</p> <p>8:30 Sex & Perspective</p> <p>Project Due: Design Language</p> <ul style="list-style-type: none"> • Sex; affection, temptation, power, reward • Gender • Occlusion • Perspective; orthographic, isometric, linear, multiple, geometry • Hard and soft shadows • Atmospheric perspective • Saturation/chroma; hue; value/tones • Game art roles <p>(WCMA List, Other Materials)</p> <p>8:30 Gaming</p> <hr/> <p>1:00 Gaming</p> <hr/> <p>1:00 Sex & Perspective</p> |
| <p style="text-align: right;">Feb 21st</p> <p>8:30 Expression & Violence</p> <p>Homework Due: 4.5.{1, 2, 6}; One essay</p> <ul style="list-style-type: none"> • Discuss color in works • Expressive rendering • Portraying character • Violence <p>(WCMA List, Other Materials)</p> <p>8:30 Editing Edit a Wikipedia article about games. Make the language objective, add credible citations, tighten the prose, and ensure that claims are properly conservative.</p> <p>Read: Ch. 19, <u>Dear Esther is a game...</u></p> <p>Play:</p> <ul style="list-style-type: none"> • <i>Wet</i> (Xbox360), <i>Dante's Inferno</i> (Xbox360), or <i>God of War</i> (any version), <i>Bastion</i> (PC/Xbox360), <i>Call of Duty</i> (any version), or <i>Battlefield</i> (any version) • <i>Monopoly</i> (board), <i>Clue</i> (board), <i>Sorry</i> (board), <i>Puzzle Strike</i> (card), <i>Flash Duel</i> (card), <i>Through the Desert</i> (board) | <p style="text-align: right;">Feb 23rd</p> <p>8:30 Editing</p> <p>8:30 Expression & Violence</p> <hr/> <p>1:00 Games as Art</p> <p>Guest speaker: Katy Kline, Interim Director of WCMA</p> <ul style="list-style-type: none"> • How to coauthor a paper • Social issues • Building an engine • Strategic play • <i>Dominion</i> and <i>Citadels</i> • Start <u>Acquisition Proposal</u> project |
| <p style="text-align: right;">Feb 28th</p> <p>8:30 The Game Design Document</p> <ul style="list-style-type: none"> • GDD structure • Strategy vs. Tactics • Introduction to mechanics • Enumerate mechanics in <i>Dominion</i> • Minimid exercise: <i>Dominion</i> <p>Read: Ch. 5 and <u>The Master of Go</u></p> <p>Play:</p> <ul style="list-style-type: none"> • <i>Settlers of Catan</i> or <i>Dominion</i> (yes, again); if you're experienced with those two, then try <i>Agricola</i> or <i>Power Grid</i> instead. • Any board or video game from the course website. | <p style="text-align: right;">Mar 1st</p> <p>8:30 Strategic Thought I</p> <p>Project Due: Acquisition Proposal</p> <ul style="list-style-type: none"> • Complete <i>Dominion</i> minimod • State • Decision trees • Algorithms • Search <hr/> <p>1:00 MINIMAX</p> <ul style="list-style-type: none"> • <i>Pente</i> exhibition • Static evaluation revisited • MINIMAX • Computability • <i>Carcassonne</i> |
| <p style="text-align: right;">Mar 6th</p> <p>8:30 Strategic Thought II</p> <p>Homework Due: 5.20.{2, 8}, 7.10.{2, 3, 4}</p> <p>or Complete a <u>proposal</u> for an existing commercial game</p> <ul style="list-style-type: none"> • Visit from Writing Center representative • Game Theory • Dominant strategies • Mixed strategies in <i>Citadels</i> and <i>RPS</i> • The Prisoner's Dilemma • Public goods and collusion in <i>Carcassonne</i> • Start <u>Mechanics Mod</u> project <p>Play:</p> <ul style="list-style-type: none"> • Any strategic combat RPG, e.g., <i>Borderlands</i>, <i>Valkyria Chronicles</i>, <i>Oblivion</i>, <i>Skyrim</i>, <i>World of Warcraft</i>, <i>Fallout</i>, or <i>Munchkin</i> • <i>Stone Age</i>, <i>Agricola</i>, or <i>Carcassonne</i> • Any RTS or TBS, e.g., <i>Civilization</i>, <i>StarCraft</i>, <i>Warcraft</i>, <i>Age of Empires II</i> (vc) <p>Read: Ch. 7</p> | <p style="text-align: right;">Mar 8th</p> <p>8:30 Choice</p> <ul style="list-style-type: none"> • Statistics and probability • Generating random numbers • Outcome trees • Combining probabilities • Expected value • Variance • <u>Lecture notes</u> <hr/> <p>1:00 <i>no afternoon session—</i></p> <p><i>consider working on your project</i></p> <p>Read: <u>The Failings of Moral Choice in Games</u></p> |
| <p style="text-align: right;">Mar 13th</p> <p>8:30 Project Presentations</p> <p>Project Due: Mechanics Mod</p> <p>Each group will give a 5-minute presentation on the game that they chose and their mod, and then reflect on their process or results. What went right? What went wrong? How can we be more effective...or efficient? Keep in mind that our true goal is learning, not producing games!</p> <p>Play:</p> <ul style="list-style-type: none"> • <i>Zack & Wiki</i> (Wii) or <i>Ratchet and Clank Future</i> (PS3) or <i>Super Mario Galaxy 2</i> (Wii) , <i>Batman: Arkham Asylum</i> (Xbox 360), <i>Minecraft</i> (PC/web; see me for password), any Choose Your Own Adventure book, or Tipover (puzzle) • <i>Puerto Rico</i> or <i>Powergrid</i> <p>Read: Ch. 8, 9</p> | <p style="text-align: right;">Mar 15th</p> <p>8:30 Efficiency I</p> <ul style="list-style-type: none"> • Recognizing and deploying mechanics • Experiment design • Graphs • State Machines • Programming analysis • <u>Lecture notes</u> <hr/> <p>1:00 Efficiency II</p> <ul style="list-style-type: none"> • Templates • Programming production • Card sleeves, stickers, and spray glue • Legos • Outsourcing • Repurposing existing and generic components • Designing to production limitations • Friendly plastic • 3D printing • Laser cutting <ul style="list-style-type: none"> • NIMBY production and mechanics demo by guest Chris Warren, OIT • Shop demo with guest Michael Taylor in the Bronfman Science Shop (B040) • Board Game Technology <p>Read: <i>Creating Games</i> Ch. 10</p> <p>Introduction to <u>Wujec's Imagine, Design, Create</u></p> |
| <p style="text-align: right;">Apr 3rd</p> <p>8:30 Machine Computation</p> <p>Homework Due: 8.11.10, 9.9.{1,6,8,13}</p> <ul style="list-style-type: none"> • Human computation • Histogram • Hello world in JavaScript + qkplay.js • Machine computation • Computer graphics <p><u>calculator.zip</u>, <u>printHistogram.zip</u>, <u>drawHistogram.zip</u></p> <p>Play:</p> <ul style="list-style-type: none"> • <i>Apples to Apples</i> or • <i>Pil</i> or • <i>Once Upon A Time</i> or • <i>Robo Rally</i> <p>Read: Ch. 6</p> | <p style="text-align: right;">Apr 5th</p> <p>8:30 Making Rules in JavaScript</p> <ul style="list-style-type: none"> • Creating state with variable declarations • Conditional rules with IF • Repeated rules with WHILE • Start <u>Explore Programming</u> <hr/> <p>1:00 Rock-Paper-Scissors</p> |
| <p style="text-align: right;">Apr 10th</p> <p>8:30 Designing Tic-Tac-Toe</p> <ul style="list-style-type: none"> • Game technology and “the main loop” • Review <i>Prisoner</i> implementation • Review <i>Smacklove</i> implementation • Project discussions (in lab) | <p style="text-align: right;">Apr 12th</p> <p>8:30 Managing Complexity</p> <ul style="list-style-type: none"> • Helper rules • Local variables • Debugging • A plan for <i>Tic-Tac-Toe</i> <hr/> <p>1:00 Implementing Tic-Tac-Toe</p> <p>Project Due: Explore Programming</p> <ul style="list-style-type: none"> • Implementing <i>Tic-Tac-Toe</i> • Go to WCMA 2:45pm: What is the equivalent of "gameplay" for traditional visual art? What would it mean to reinterpret a Georgia O'Keefe painting in the medium of a game? Can some of the ideas provoked by specific works be explored effectively in an interactive context? |
| <p style="text-align: right;">Apr 17th</p> <p>8:30 Physical Simulation</p> <ul style="list-style-type: none"> • Designing <i>Lonely Paddle</i> • Detecting collisions • Newton's Laws for dynamics <p>Play:</p> <ul style="list-style-type: none"> • <i>Left 4 Dead 2</i> in coop mode (Xbox 360, or your PC, or Gfx Lab by appt.) or • <i>Alien Swarm</i> (your Steam PC, or Gfx Lab by appt.) or • <i>Battlestar Galactica</i> or • <i>Pandemic</i> or • <i>Shadows Over Camelot</i> <p>Read: Ch. 21</p> | <p style="text-align: right;">Apr 19th</p> <p>8:30 Final Project Preproduction</p> <p>Homework Due: At least one individual final proposal</p> <ul style="list-style-type: none"> • Form Final Project teams • Final project topics • Final project schedules <p>Read: Ch. 13</p> <hr/> <p>1:00 Pong</p> <ul style="list-style-type: none"> • Implementing <i>Pong</i> |

¹You can only write in pencil in WCMA, for the safety of the artwork.

| TUESDAY | | THURSDAY | |
|----------|--|----------|---|
| Apr 24th | <p>8:30  Project Work</p> <p>Homework Due: GDD outlines with 1-page project proposals</p> <p>Read: Ch. 14</p> | Apr 26th | <p>8:30  Project Work</p> <hr/> <p>1:00  Producer Workshopping</p> <p>4/26/12: Revise your game with designer and producer Rob Gallerani from Vicarious Visions, an industry veteran of over 20 titles including <i>Guitar Hero: On Tour</i>, <i>Spider-Man 3</i>, <i>Batman Begins</i>, and <i>Tony Hawk's American Sk8land</i>.</p> |
| May 1st | <p>8:30  Practice Presentations</p> <p>Homework Due: 5-minute Team Presentation</p> <ul style="list-style-type: none"> • Each team presents • Critiques and feedback | May 3rd | <p>8:30  Final Project Work</p> <hr/> <p>1:00  Producer Meeting</p> <p>Rob Gallerani returns to evaluate revised games and make final balance recommendations.</p> |
| May 8th | <p>8:30  Present Final Projects</p> <p>Project Due: Final Project</p> <p>Short in-class project presentations, submit physical games and GDDs. Guests welcome.</p> | May 10th | <p><i>No morning class</i></p> <hr/> <p>1:00  Post Mortem Party</p> <p>Play each other's games, swap stories, eat snacks, and fill out course evaluations. Guests welcome.</p> |