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CS6955-001: Science of Game Design

Syllabus
Spring 2018
Mondays, Wednesdays / 01:25PM - 02:45PM (MT)
M LI (Marriott Library), Room 1715

Description

In this course we will examine the use of computer systems to aid in game design, drawing upon tools of artificial intelligence and operations research. The effectiveness of video games and virtual worlds depends on a precise interplay between a person's cognition (an *inner environment*), the game's controls (an *interface*), and a fictional universe (an *outer environment*); the interplay is concerned with attaining design goals by adapting the inner environment to the outer environment. We will explore the way in which that adaptation of environments in games is brought about, which is the central concern of game design. The exploration will primarily involve the analysis, design, development, and validation of computational models that serve as proxies of inner environments, outer environments, and interfaces to help designers construct artifacts aimed at changing a player's existing actions into preferred ones.

Class format is a combination of seminar and lecture, drawing from texts from artificial intelligence, game design, cognitive psychology, computational narratology, linguistics, narrative and film theory, and sociology. Grading is based on class participation (via discussions and in-class presentation) as well as a term project.

Instructor

Rogelio E. Cardona-Rivera
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Office: MEB #3450 and Building 72 #214

Office Hours: TBD and by appointment.

Course Website

https://utah.instructure.com/courses/473967

Textbooks

None. All assigned readings will either be made available by the instructor or by the university library.

Prerequisites

Graduate Standing in the School of Computing, or permission of the instructor.

Note: The focus of the course is interdisciplinary, and I hope to attract students with interest both inside and outside computing / computer science. While the emphasis of this course will be on computational techniques from artificial intelligence, the scope encompasses human-centered theoretical, design, and engineering issues that arise from designing video games. Thus, the course will benefit from the participation of students with diverse disciplinary traditions.

Examinations

None, but there will be a term project.

Grading

- A — 90 - 100%
- B — 80 - 89%
- C — 70 - 79%
- D — 60 - 69%
- F — 0 - 59%

Breakdown

- Term Project (50%)

Students will be evaluated using a semester-long group project on a topic of their choosing (approved by the instructor). The project is an 8-week student-directed inquiry. By default, a project will consist of building some software that involves the development of novel algorithms relevant to the automated human-centered design and/or evaluation of analog or digital game content based on topics covered in the readings; exceptions will be made for individuals who request to work on a project directly related to their degree that is related to the class content.

The 50% grade for the team project is broken down into the following deliverables:

- ✦ Project Proposal (15%)

  A two-page executive summary of the novel algorithms for the automated human-centered design and/or evaluation of game content, including prior work, proposed approach, potential risks, and options for evaluating the success of your method. Must also include an anticipated breakdown of individual team-member contributions/roles on the project.

  A successful proposal will be detailed enough to communicate the problem being studied, the approach being used to solve it, the evaluation methods used, and why someone might care about your project. A successful proposal will describe at least one *research question*. Good research questions address two aspects of research: (1) why it's important, and (2) the falsifiable claim to be verified.

Your proposal should be 2 full pages formatted using the AAAI style guide, found at: https://www.aaai.org/Publications/Author/author.php

- Progress Report (5%)

  A two-page summary of the team progress. At this point of the semester, you should be making significant progress toward finishing. You will receive feedback on your progress report and have an opportunity to address your concerns prior to the final submission. I encourage you not to take this portion of the project too lightly. If you have significant issues with your project, this is the time to begin to address them before the final submission.

  Your progress report should be 2 full pages formatted using the AAAI style guide, found at: https://www.aaai.org/Publications/Author/author.php

- Completed System (15%)

  A demonstration of the system, along with software that has been developed. Must include installation and operation instructions (preferably, the project should contain example inputs with a description of expected outputs). For more design-oriented projects, paper prototypes are acceptable as submissions.

- Final Report and Presentation (15%)

  Both (a) a written report that documents your system, presents examples of its use, and analyzes its scientific contributions, and (b) a 20-minute presentation of your report.

  The final report should be six full pages formatted using the AAAI style guide, found at: https://www.aaai.org/Publications/Author/author.php. A successful paper will be written clearly and proofread for typographical and grammatical errors. All relevant published work should be cited throughout the text of the paper. As a rule of thumb, aim to reference 8-12 high-quality publications in academic conferences or journals. Your paper should address the following aspects of your project: (1) Background information, an overview of the problem studied, the research questions addressed, and a preview of the findings; (2) A detailed presentation of the novel algorithms for the automated human-centered design and/or evaluation of game content; (3) A detailed description of the evaluation used, clearly stating the hypothesis/hypotheses tested; (4) A results section presenting all of the data collected; (5) An interpretation section where highlights of the data are reiterated and some conclusions are drawn; (6) General conclusions and future work; (7) A section acknowledging any other sources of contribution to the project (e.g., a faculty mentor); and (8) A list of all works cited. It may be helpful to think of these eight criteria as a top-level outline for your paper.

  The final presentation should communicate the problem studied, the approach taken, the experimental design, an analysis of data, and will clearly state any

conclusions drawn. To be fair, your presentation files must be uploaded to Canvas before the final presentations start. You will be required to make your presentation from the materials you submit to Canvas, so if you have any special requirements make sure they are sorted out ahead of time. Only one group member should present, but all members will receive the same presentation grade. Therefore, all group members should contribute to the preparation of the presentation materials. Note, there is likely going to be a lot of material to cover in the the time allotted, so make sure to practice your presentation ahead of time — you will be stopped at the time limit.

All deliverables will be submit on the (Canvas) Course Website. Please follow these explicit instructions for how to prepare and name your submissions:

1. When you submit your proposal, include the names of all your team members. When you receive feedback, you will be assigned a team ID number.
2. Your progress report should be prepared with your team members' names and your team ID included.
3. Your progress report, completed system, final paper, and final presentation submission should be submitted as .pdf files or a .zip file as appropriate, using the following naming convention: cs6955.team.(ID).(submission).pdf. In your actual file, replace "(ID)" with your team's ID and "(submission)" with one of "proposal", "progress", "final," "system," or "presentation." For example, if your team ID is 3 and you are submitting your progress report, your file should be named "cs6955.team. 3.status.pdf".

Failure to follow this naming convention may result in your file being lost or mishandled. This will reflect negatively on your grade.

‣ Paper Presentation (25%)

During Week 1, students are responsible for signing up to present papers they find interesting. Students will submit a request for seven (7) papers that they are interested in presenting from the course list of readings; note that a request to present a particular paper may not be satisfied and that all course readings will be distributed as evenly as possible. After papers are assigned, the remaining papers will be randomly allocated across the class. Starting on Week 2, students will present their assigned papers. Each presentation is expected to take 15-20 minutes, and students are expected to lead subsequent in-class discussions of the papers they present.

Leading the discussion means:

1. Familiarizing yourself enough with the paper to be able to answer questions that may come up;
2. Preparing potential discussion points if the discussion needs prompting.

- In-class Participation (20%)

There will be a set of readings assigned for each class meeting. Students are expected to read all assigned readings before the day they appear on the calendar and come prepared to discuss any or all of them. Students must join in discussion about the papers we talk about and bring your own insights to bear on the discussion.

- Experiment Participation or Experiment Analysis (5%)

A constituent part of the Science of Game Design is the deployment of human-subjects experiments to validate formal theories of design and/or player behavior. As such, it is important to gain exposure to such experiments as part of a curriculum in this field. To satisfy this requirement, you must do one of the following:

1. Design a research study in a manner suitable for submission to the University's Institutional Review Board (see: http://irb.utah.edu/submit-application/new-studies/). The study must involve games and can be wholly original or can be a rational reconstruction of a study that has already been published in a peer-reviewed conference or journal.

2. Participate in an external research experiment (i.e. not "in-class"). Researchers in the School of Computing and the Entertainment Arts and Engineering program conduct experiments during the course of their games research activities. The instructor will make available a list of such experiments that can be used to satisfy this requirement.

Course Objectives

1. Introduction to computational modeling of the game design process, including modeling anticipated effects of designs on potential players and constructing virtual environments to elicit particular behaviors.
2. For students with a primary background in computer science: exposure to theories from other disciplines, including: narrative, linguistics, cognitive psychology, and design.
3. For students with a primary background in design, social science, or the arts: exposure to representing and reasoning over human-centered design knowledge in artificial intelligence and operations research.

Expected Learning Outcomes

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

1. Discuss fundamental issues and perspectives surrounding the design of video games and virtual worlds.

2. Understand how utility theory and decision theory can serve as a logical framework for rational choices among designed alternatives.
3. Identify the body of techniques for modeling how players make optimal and satisficing decisions in game contexts.
4. Model how players seek alternatives and outcomes through means-ends reasoning.
5. Identify opportunities to precisely structure the design of games to elicit specific behaviors from their players.
6. Understand how to structure experiments designed to empirically validate theories of game design and/or player behavior.

Absence Policy

- Students are expected to be in class. The instructor will call roll 8 times during the semester. You may have an unexcused absence for one of those roll calls without penalty. Further unexcused absences will result in a 5 point reduction of your final grade for each session missed. In addition, attendance on 4/23/16 and 4/25/16 is required for all students. Unexcused absences from class on those days wills result in a 10 point reduction of your final grade for each session missed.
- All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion.
- Absences pre-approved by the instructor will be honored; documented medical excuses or other excused absences will not adversely affect grades.
- Conference travel or other scholarly duties discussed well in advance of a missed session may be excused at the discretion of the instructor.

Cheating Policy

- Every student is responsible for their own work.
- Discussions about homework are allowed, but homework must be done alone.
- Cite references and other classmates if help is received from either.
- Follow the Student Code of Academic Integrity.

Students With Disabilities

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you need accommodations in a class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union, 581-5020 (V/TDD) to make arrangements for accommodations. All written information in a course can be made available in alternative format with prior notification to the Center for Disability Services.

If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course.

College of Engineering Semester Guidelines

The College of Engineering Semester Guidelines contain important dates regarding adding, dropping and withdrawing from classes as well as the College Policy regarding repeating courses. To consult the guidelines, go to:
https://www.coe.utah.edu/wp-content/uploads/pdf/faculty/semester_guidelines.pdf

School of Computing Policies and Guidelines

The School of Computing Policies and Guidelines represent important information that students taking courses in, or seeking degrees from, the School of Computing, must be aware of. It is important that you read, understand, and adhere to this information. To consult the policies and guidelines, go to:

https://www.cs.utah.edu/~germain/SoC_Guidelines_Spring_2017

Students are responsible for the information contained therein.

Schedule

The schedule is subject to change pending student interests and background. The official schedule will be kept on the course webpage, and will be updated periodically to reflect changes as the semester progresses. It is the student's responsibility to check the schedule regularly for changes. The instructor will communicate any changes in deadlines to students in a timely manner via email and/or announcements in class.

Note, it is the student's responsibility to check their official email address at least once daily and to come to class. Failure to do so does not excuse missed deadlines.

Week	Date	Topics	Presenter	Due
Introduction to the Science of Game Design				
1	Mon., Jan. 8th	Overview of Class: Objectives, Outcomes, and Motivation	Instructor	
The Inner Environment: Overview of Memory, Attention, Motivation, Emotion, and Learning				
	Wed., Jan. 10th	• Celia Hodent. "Perception" (Chapter 3), in *The Gamer's Brain*. CRC Press, 2017. • Celia Hodent. "Memory" (Chapter 4), in *The Gamer's Brain*. CRC Press, 2017. • Celia Hodent. "Attention" (Chapter 5), in *The Gamer's Brain*. CRC Press, 2017.	Instructor	

2	Mon., Jan. 15th	Martin Luther King, Jr. Day (No Class)		Paper Request
	Wed., Jan. 17th	• Celia Hodent. “Motivation” (Chapter 6), in *The Gamer’s Brain*. CRC Press, 2017. • Celia Hodent. “Emotion” (Chapter 7), in *The Gamer’s Brain*. CRC Press, 2017. • Celia Hodent. “Learning Principles” (Chapter 8), in *The Gamer’s Brain*. CRC Press, 2017.	TBD	
The Inner Environment: The Psychology of Thinking				
3	Mon., Jan. 22nd	• Radvansky, Gabriel A., and Jeffrey M. Zacks. "Event boundaries in memory and cognition." *Current Opinion in Behavioral Sciences* 17 (2017): 133-140. • Herbert A. Simon. “Theories of Bounded Rationality” (Chapter 8), in C. B. McGuire and Roy Radner (eds.), *Decision and Organization*. North-Holland Publishing Company, 1972. • Amos Tversky and Daniel Kahneman. "The framing of decisions and the psychology of choice." *Science* 221, no. 4481 (1981): 453-458.	TBD	
	Wed., Jan. 24th	• Gerd Gigerenzer and Daniel G. Goldstein. "Reasoning the fast and frugal way: models of bounded rationality." *Psychological review* 103, no. 4 (1996): 650-669. • Dennis Waskul and Matt Lust. "Role−Playing and Playing Roles: The Person, Player, and Persona in Fantasy Role−Playing." *Symbolic Interaction* 27, no. 3 (2004): 333-356.	TBD	
The Inner Environment: Identity				

4	Mon., Jan. 29th	• Pauline Hope Cheong, and Kishonna Gray. "Mediated intercultural dialectics: Identity perceptions and performances in virtual worlds." *Journal of International and Intercultural Communication* 4, no. 4 (2011): 265-271. • Chong-U. Lim and D. Fox Harrell. "Developing Computational Models of Players' Identities and Values from Videogame Avatars." In *Proceedings of the 10th International Conference on the Foundations of Digital Games*. 2015. • Ignacio X. Domínguez, Rogelio E. Cardona-Rivera, James K. Vance, and David L. Roberts. "The Mimesis Effect: The effect of roles on player choice in interactive narrative role-playing games." In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, pp. 3438-3449, 2016.	TBD	
The Outer Environment: Theories of Player Choice Representation				
	Wed., Jan. 31st	• Peter Mawhorter, Michael Mateas, Noah Wardrip-Fruin, and Arnav Jhala. 2014. “Towards a Theory of Choice Poetics.” In *Proceedings of the 9th International Conference on the Foundations of Digital Games.* • Sam Kabo Ashwell. 2015. “Standard Patterns in Choice-Based Games.” Available online: https://heterogenoustasks.wordpress.com/2015/01/26/standard-patterns-in-choice-based-games/	TBD	
5	Mon., Feb. 5th	• Dave Mark. “Defining Decision Theory” (Chapter 4), in *Behavioral Mathematics for Game AI*. Charles River Media, 2009. • Dave Mark. “Game Theory” (Chapter 5), in *Behavioral Mathematics for Game AI*. Charles River Media, 2009.	TBD	
The Outer Environment: Theories of Player Choice Evaluation				

	Wed., Feb. 7th	• Steve Schecter and Herbert Gintis. “Backward Induction” (Chapter 1), in *Introduction to Game Theory*. Unpublished manuscript, 2012. Available: http://www4.ncsu.edu/~schecter/ma_440_fa12/book.pdf • Stuart Russell and Peter Norvig. “Adversarial Search” (Chapter 5), in *Artificial Intelligence: A Modern Approach (3rd ed.)*. Prentice Hall, 2010.	TBD	
6	Mon., Feb. 12th	• Cameron B. Browne, Edward Powley, Daniel Whitehouse, Simon M. Lucas, Peter I. Cowling, Philipp Rohlfshagen, Stephen Tavener, Diego Perez, Spyridon Samothrakis, and Simon Colton. "A survey of monte carlo tree search methods." *IEEE Transactions on Computational Intelligence and AI in Games*. vol. 4, no. 1 (2012): 1-43.	TBD	
The Outer Environment: Modeling Optimal Behavior				
	Wed., Feb. 14th	• Thomas S. Ferguson. “Linear Programming: A Concise Introduction.” Unpublished manuscript. Available: https://www.math.ucla.edu/~tom/LP.pdf	TBD	
7	Mon., Feb. 19th	Presidents’ Day (No Class)		Project Proposal
	Wed., Feb. 21st	• S. P. Bradley, A. C. Hax, and T. L. Magnanti. “Dynamic Programming.” (Chapter 11) In *Applied Mathematical Programming*, Addison-Wesley, 1977.	TBD	
The Outer Environment: Modeling Satisficing / Non-Optimal Behavior				

8	Mon., Feb. 26th	• Michael N. Katehakis and Arthur F. Veinott Jr. "The multi-armed bandit problem: decomposition and computation." *Mathematics of Operations Research* 12, no. 2 (1987): 262-268. • Joannes Vermorel and Mehryar Mohri. "Multi-armed bandit algorithms and empirical evaluation." In *Proceedings of the 16th European Conference on Machine Learning*, pp. 437-448. 2005. • Christoffer Holmgård, Antonios Liapis, Julian Togelius, and Georgios N. Yannakakis. "Monte-carlo tree search for persona based player modeling." In *Proceedings of the 11th Artificial Intelligence and Interactive Digital Entertainment Conference*. 2015.	TBD	
The Outer Environment: Heuristic Search & Means-End Analysis				
	Wed., Feb. 28th	• Judea Pearl. “Heuristics and Problem Representations” (Chapter 1), in *Heuristics: Intelligent Search Strategies for Computer Problem Solving*. Addison-Wesley, 1984. • Judea Pearl. “Basic Heuristic-Search Procedures” (Chapter 2), in *Heuristics: Intelligent Search Strategies for Computer Problem Solving*. Addison-Wesley, 1984.	TBD	
9	Mon., Mar. 5th	• Daniel S. Weld. ”An introduction to least commitment planning." *AI magazine* 15, no. 4 (1994): 27. • Stephen N. Cresswell, Thomas L. McCluskey, and Margaret M. West. "Acquiring planning domain models using LOCM." *The Knowledge Engineering Review* 28, no. 2 (2013): 195-213.	TBD	
The Outer Environment: Allocation of Resources for Search				

	Wed., Mar. 7th	• Herbert A. Simon and Joseph B. Kadane. "Optimal problem-solving search: All-or-none solutions." *Artificial Intelligence* 6, no. 3 (1975): 235-247. • Gillian Smith, Jim Whitehead, and Michael Mateas. "Tanagra: Reactive planning and constraint solving for mixed-initiative level design." *IEEE Transactions on Computational Intelligence and AI in Games* 3, no. 3 (2011): 201-215.	TBD	
The Outer Environment: Formal Logics of Design				
10	Mon., Mar. 12th	• Nathaniel Love, Timothy Hinrichs, David Haley, Eric Schkufza, Michael Genesereth. General Game Playing: Game Description Language Specification. Technical Report LG-2006-01, 2006, Stanford University. • Tom Schaul. "A video game description language for model-based or interactive learning." In *Proceedings of the 2013 IEEE Conference on Computational Intelligence in Games*, pp. 1-8. IEEE, 2013. • Joris Dormans. ”Machinations: Elemental Feedback Patterns for Game Design" in *Proceedings of the 5th International North American Conference on Intelligent Games and Simulation,* pp. 33-40, 2009. Available online: http://www.jorisdormans.nl/article.php?ref=machinations	TBD	

	Wed., Mar. 14th	• Raph Koster. “A grammar of gameplay - game atoms: can games be diagrammed?” Presented at the *2005 Game Developers Conference*. Available online: https://www.raphkoster.com/games/presentations/a-grammar-of-gameplay/ • Michael Mateas, and Noah Wardrip-Fruin. "Defining operational logics." In *Proceedings of the 2009 Conference of the Digital Games Research Association*, 2009. • Joseph C. Osborn, Noah Wardrip-Fruin, and Michael Mateas. "Refining operational logics." In *Proceedings of the 12th International Conference on the Foundations of Digital Games*, p. 27, 2017.	TBD	
11	Mon., Mar. 19th	Spring Break (No Class)		Progress Report
	Wed., Mar. 21st	Spring Break (No Class)		
The Interface: Context				
12	Mon., Mar. 26th	• Jonas Linderoth. "Why gamers don’t learn more: An ecological approach to games as learning environments." *Journal of Gaming & Virtual Worlds* 4, no. 1 (2012): 45-62. • Henry Jenkins. "Game Design as Narrative Architecture”, in Noah Wardrip-Fruin, Pat Harrington (eds.) *First Person: New Media as Story, Performance, and Game*. The MIT Press, 2004. • Richard H. Thaler, Cass R. Sunstein, John P. Balz. “Choice Architecture” (Chapter 25), in Eldar Shafir (ed.) *The Behavioral Foundations of Public Policy*. Princeton University Press, 2013.	TBD	

	Wed., Mar. 28th	• Karl E. Steiner and Lavanya Voruganti. "A comparison of guidance cues in desktop virtual environments." *Virtual Reality* 7, no. 3-4 (2004): 140-147. • Khandaker, Mitu. "How games can touch you: Ethics of the videogame controller." in Karen Schrier (ed.) *Designing Games for Ethics: Models, Techniques and Frameworks* (2010): 142-159.	TBD	
The Interface: Representation of Design Problems				
13	Mon., Apr. 2nd	• Donald A. Norman. "Affordance, conventions, and design." interactions 6, no. 3 (1999): 38-43. • Robin Hunicke, Marc LeBlanc, and Robert Zubek. "MDA: A formal approach to game design and game research." In *Proceedings of the AAAI Workshop on Challenges in Game AI*, pp. 1722-1727, 2004. • Louchart, S., and Aylett, R. “Solving the Narrative Paradox in VEs – Lessons from RPGs”. In *Proceedings of the International Conference on Intelligent Virtual Agents*, pp. 244–248, 2003.	TBD	
	Wed., Apr. 4th	• Mike Treanor, Alexander Zook, Mirjam P. Eladhari, Julian Togelius, Gillian Smith, Michael Cook, Tommy Thompson, Brian Magerko, John Levine, and Adam Smith. "AI-based game design patterns.” In *Proceedings of the 10th International Conference on the Foundations of Digital Games,* 2015. • Rogelio E. Cardona-Rivera and R. Michael Young. “Games as Conversation.” In *Proceedings of the 3rd Workshop on Games and NLP at the 10th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*, pp. 2-8, 2014. • Chris Martens and Matthew A. Hammer. “Languages of play: towards semantic foundations for game interfaces.” In *Proceedings of the 12th International Conference on the Foundations of Digital Games*, 2017.	TBD	

The Interface: Changes in Representation				
14	Mon., Apr. 9th	• Katie Salen and Eric Zimmerman. “Defining Rules” (Chapter 11), in *Rules of Play: Game Design Fundamentals*. MIT Press, 2003. • Katie Salen and Eric Zimmerman. “Rules on Three Levels” (Chapter 12), in *Rules of Play: Game Design Fundamentals*. MIT Press, 2003.	TBD	
	Wed., Apr. 11th	• Adam M. Smith, Mark J. Nelson, and Michael Mateas. "Ludocore: A logical game engine for modeling videogames." In *Proceedings of the 2010 IEEE Symposium on Computational Intelligence and Games*, pp. 91-98, 2010. • Chris Martens. "Ceptre: A language for modeling generative interactive systems." In *Proceedings of the 11th Artificial Intelligence and Interactive Digital Entertainment Conference*. 2015.	TBD	
The Interface: The Algorithmic Process of Design				
15	Mon., Apr. 16th	• Herbert A. Simon. “Style in Design.” In *Proceedings of the 2nd Annual Conference of the Environmental Design Research Association*, pp. 1-10, 1971. • Gillian Smith and Jim Whitehead. "Analyzing the expressive range of a level generator." In *Proceedings of the 2010 Workshop on Procedural Content Generation in Games*, p. 4., 2010. • Kate Compton. 2016. “So you want to build a generator…” Available online: http://galaxykate0.tumblr.com/post/139774965871/so-you-want-to-build-a-generator	TBD	

	Wed., Apr. 18th	• Roland van der Linden, Ricardo Lopes, and Rafael Bidarra. "Procedural generation of dungeons." *IEEE Transactions on Computational Intelligence and AI in Games* 6, no. 1 (2014): 78-89. • Adam M. Smith, and Michael Mateas. "Answer set programming for procedural content generation: A design space approach." *IEEE Transactions on Computational Intelligence and AI in Games* 3, no. 3 (2011): 187-200. • Ruben Michaël Smelik, Tim Tutenel, Klaas Jan de Kraker, and Rafael Bidarra. "A declarative approach to procedural modeling of virtual worlds." *Computers & Graphics* 35, no. 2 (2011): 352-363. • Calvin Ashmore and Michael Nitsche. "The Quest in a Generated World." In *Proceedings of the 2007 Conference of the Digital Games Research Association,* 2007.	TBD	Final Report and Completed System
16	Mon., Apr. 23rd	Final Presentation		Final Presentation (all teams)
	Wed., Apr. 25th	Final Presentation		