

COMM 493A/593A: GAMES and LEARNING

Spring 2018 Course Syllabus
January 9th – August 4th, 2018

INSTRUCTOR INFORMATION

Name: Joe A. Wasserman
Website: <http://www.joewasserman.com>
Twitter: <https://twitter.com/JoeWasserman>

COURSE PURPOSE and OBJECTIVES

The purpose of this course is to develop a broad understanding of learning from playing video and board games, with an emphasis on recent research, recent theory, and hands-on experience. Topics will include cognitive, social, and affective process related to learning from games; recreational and formal learning environments; and characteristics of effective learning games.

Objectives

This course is designed to enrich students' understandings of and abilities to apply the theory and practice of learning from games. By the end of this course, students should meet the following objectives:

- Students will understand the major theories of game-based learning and be able to apply them within context
- Students will understand the impact of games on learning outcomes
- Students will demonstrate knowledge of criteria to evaluate scholarly research on games and learning
- Students will apply theory and research on games and learning to the design of a learning game
- Students will analyze the mechanics, dynamics, and aesthetics of games and modify them
- Students will evaluate the learning potential of games
- Students will create a boardgame designed for learning a communication topic

REQUIRED MATERIALS

Due to the nature of this small seminar course, it is very important that you stay on top of your readings in this class as this material (and any outside research you conduct on your own) will inform our discussions, writing assignments, and projects.

Readings

There is no textbook for this course. Readings will be posted and available via eCampus, email, and/or provided in person.

Games

Throughout this course, you will play a variety of games, both tabletop and digital. All assigned digital games are **free**. A number of tabletop games will be provided for play during class. Some gameplay assignments will require that you use websites that may require you to create an account. These websites are:

Board Game Arena <https://en.boardgamearena.com/>

Days of Wonder <https://www.daysof wonder.com/online/en/play/>

eCampus

If you are enrolled in the course, you should have access to the course on **eCampus** (<https://ecampus.wvu.edu/>). Copies of

the syllabus, assignment instruction sheets, additional readings, and grades will be available through this site.

Collaboration Tools

Several of the assignments in this class require coordinating with your peers and working collaboratively. There are a number of **free** tools available to streamline coordination and collaboration. The following free tools are recommended, though you may use others:

Scheduling: <https://doodle.com/>

Collaborative project management: <https://app.asana.com/>

Collaborative document management: <https://drive.google.com/>

ASSIGNMENTS

Throughout this course, you will have the opportunity to earn **1000 points** based on your in-class participation, assignments, and projects. These are described in greater detail below.

In-class participation (20%)

You will be expected to actively participate in class discussion and other activities. Active participation requires careful reading before class to provide you a solid grasp of all materials. Additionally, when games are assigned, active participation requires playing these games to provide an experiential frame of reference for discussion.

Course discussions begin from a thorough understanding of assigned readings. While we will discuss difficult points in the reading, the majority of discussion will go beyond individual texts, including but not limited to identifying connections between multiple readings within and across weeks, applying readings to evaluating games, and dissecting implications not described in the readings themselves. During discussions, you will be expected to ask insightful questions, make compelling arguments, apply theory and research to your gameplay experiences, and refer to specific parts of the assigned readings.

Graduate students enrolled in 593A will be responsible for reading additional material marked by an asterisk (*) on the schedule. All graduate students will be expected to (a) summarize the most important elements of these readings for undergraduate students and (b) incorporate them into in-class discussions when appropriate. All asterisked readings are *optional* for undergraduate students enrolled in 493A.

200 points

Final project: Design a boardgame for learning (30%)

By the end of the semester, you and a small group of your peers will design and develop a boardgame for learning a communication topic. No prior game design experience or technical skills are required. This final project will be an opportunity to apply the theory and research covered in this class, as well as additional literature research of your own, to the design of a learning game.

You will design your game to teach a particular academic Communication Studies topic that would be appropriate for use in one of the introductory Communication Studies class offered at WVU. After your group selects a topic, you will (a) research literature on that topic and (b) design your game with that age group in mind. Your research should be based in scholarship on the topic of the sort appearing on scholar.google.com, not an encyclopedia like Wikipedia, although that may be a place to begin your literature search.

Your design will include a complete, playable game and write a full rulebook with which others will be able to learn and play your game. In addition to the game itself, this final project will have a written component in which you will describe your game's learning objective(s), provide recommendations for incorporating it into a curriculum, and justify your design decisions based on theoretical and empirical literature on games and learning. More details, including more detailed instructions and expectations, will be provided. Including related preliminary assignments and the cumulative final project, this final project is worth **300 points**.

CHOOSE-YOUR-OWN SYLLABUS (50%)

You have a choice for the remainder of your assignments this semester, which will comprise the remaining 50% of your total course grade. From the menu of potential assignments below, you will select a number of assignments between the minimum and maximum specified to create a personalized syllabus. More details, including more detailed instructions and expectations, will be provided. In combination, these assignments will total **500 points**.

Position papers (minimum: 1, maximum: 8, 5% each)

In these writing assignments, you will be asked to formulate and defend an argument about assigned readings during that particular week. You do not need to find any additional sources, although you may.

Every position paper should include the following components: (a) a clear statement of your position, (b) 2-3 arguments that support your position, and (c) 1+ piece of evidence from the assigned readings in support of each argument. Be sure to cite your sources properly. You will be graded on the clarity of your writing, the structure and persuasiveness of your arguments, and your use of evidence to support your arguments and position.

Your position should be a proposition of fact, value, or policy. See changingminds.org/disciplines/argument/making_argument/proposition.htm

Due: beginning of class on the day of the assigned readings. 2-3 pages each. 50 points each

Game evaluation papers (minimum: 1, maximum: 4, 5% each)

In these writing assignments, you will be asked to apply theoretical and empirical readings to evaluate the learning potential of the game assigned during that week. You may use any readings assigned up to that date. You do not need to find additional sources, although you may.

Every game evaluation paper should focus on **2-3 characteristics** of the game that you will evaluate in terms of their potential for learning. For each characteristic, your report should include (a) clear statement of your evaluations of your selected 2-3 characteristics, (b) 1-2 strong arguments in support of each evaluation, and (c) 1+ piece of evidence from the assigned readings in support of each argument. You will be graded on the clarity of your writing, the structure and persuasiveness of your arguments, and your use of evidence to support your arguments and evaluations.

Due: if the game is played as homework, at the beginning of class on the due date of the assigned game; if the game is played in class, at the beginning of the class FOLLOWING your play of the assigned game. 2-3 pages each. 50 points each

Research abstract (minimum: 0, maximum: 4, 5% each)

You will be asked to find one (1) additional empirical research article related to the week's assigned readings, to write an abstract about this reading, and to briefly (<5 minutes) present the highlights of this research article to the class. You will be asked to bring a copy of your abstract for everyone in the class (including me!).

Your abstract should include the following sections: (a) full APA 6th edition reference for the article, (b) purpose, (c) hypotheses/research questions, (d) methods, (e) results, and (f) implications. The purpose, methods, and implications should be written in your own words—do not merely restate the article. Furthermore, the implications of the article for research or use of games for learning should be original to you and not contained within the article. The hypotheses, research questions, and results may be *selectively* quoted verbatim from the article.

An example abstract in this format will be provided.

Due: beginning of class on the day of the assigned readings. 1-2 pages. 50 points each

MDA analysis (minimum: 0, maximum: 4, 5% each)

For each Mechanics, Dynamics, and Aesthetics (MDA; see Hunicke, LeBlanc, & Zubek, 2004) analysis, you will play one (1) game in addition to those already assigned that you have not already played. The goal of this assignment is to add additional game mechanics and dynamics to your game design toolkit. The game must either be (a) a serious game / game for learning or (b) a boardgame.

Your MDA analysis will include (a) a brief description of the game's *mechanics*, (b) your analysis of how those game mechanics contribute to the game *dynamics* you observed and/or experienced during gameplay, and (c) your analysis of how those dynamics contribute to the game *aesthetics* you observed and/or experienced during gameplay. (Note that these words are used not in their everyday senses, but in the specialized senses explained by Hunicke et al., 2004.)

For digital game options, see:

<http://www.gvlibraries.org/digitalgames>

<http://explorabl.es/>

For boardgame playing opportunities, see weekly Tuesday Tabletop Game Nights at the Morgantown Library and monthly Saturday game days at Four Horsemen Morgantown:

<https://www.facebook.com/groups/647303515463992/events/>

Due: beginning of class. 2-3 pages. 50 points each

Rules evaluation and rewrite (minimum: 0, maximum: 2, 5% each)

In these writing assignments, you will be asked to (a) evaluate the rulebook of one of the assigned games and (b) rewrite those rules to improve them based on your critiques.

Your evaluation should be 1-2 pages long. A style guide for writing boardgame rules will be provided.

You will be graded on the structure, clarity, consistency, concision, and completeness of your evaluation and re-write.

Due: beginning of the class FOLLOWING your play of the assigned game. 50 points each

Discussion facilitator (493A minimum: 0 / 593A minimum: 1, 493A maximum: 2 / 593A maximum: 3, 5% each)

As discussion facilitator for the day, you will be expected to have a mastery-level understanding of the day's readings. Rather than presenting your understanding, your task will be to *facilitate discussion*. You will be expected to prepare a

number of points of discussion and/or activities to promote class participation and discussion, potentially including open-ended questions without obvious answers, contentious statements for peers to consider and discuss their agreement or disagreement, and/or whole-class activities that incorporate multiple readings. Your goal will be to encourage your peers to engage with the assigned readings via lively discussion.

It is recommend that you schedule a meeting with me to discuss your plans in advance of the class for which you will be discussion facilitator.

In addition to leading discussion during class, you will be asked to turn in a short, 1-page printed version of your prepared questions, statements, activities, etc.

Due: beginning of class on the day of facilitating discussion. 50 points each

Classroom takeover (minimum: 0, maximum: 1, 10%) *593A only*

This assignment is available only to graduate students registered in 593A. You will take over the class for one day toward the end of the semester to cover a topic of your choosing related to games and learning. The topic should be one that we are not already covering and is of interest to you—but on which you are not already an expert. You will be responsible for (a) assigning readings and (b) being the discussion facilitator that day. If you wish to incorporate an activity of some sort, you may.

Instructions for this assignment are intentionally left vague—you may be as creative with this assignment as you wish. If you choose this option, we will meet to discuss your plans in advance of your classroom takeover.

Due: beginning of class on the day of taking over the classroom. 100 points

Final project add-on: Print-ready files (minimum: 0, maximum: 1, 5%)

This assignment is an add-on to the final project assignment. In addition to the final project, you will prepare print-ready files for all paper components of your group's game. These graphics files will be uploaded to BoardGameGeek and made available for free to anyone who wishes to download, print, and play your game. It is recommended that you have some experience working with graphical editing programs if you wish to select this option. Free game-specific design software resources will be provided if you choose this option.

Due: see class schedule. 50 points

Final project add-on: Public relations (minimum: 0, maximum: 1, 5%)

This assignment is an add-on to the final project assignment. In addition to the final project, you will write a post to BoardGameGeek's Games in the Classroom forum, sharing your group's game with the community. This assignment will necessitate that you create a BoardGameGeek account (if you don't already have one) or allow me to post it on your behalf. Your post will include (a) a brief description of this class, (b) a brief description of the assignment, (c) an explanation of your game (including pictures of your game), and (d) a plain language explanation of the theory and research that informed your design. If you or another of your group members selected the Print-and-play add-on, include a link directly to these files as well.

Due: see class schedule. 50 points

Final project add-on: Learning measurement (minimum: 0, maximum: 1,

5%) *593A only*

This assignment is available only to graduate students registered in 593A, and is an add-on to the final project assignment. In addition to the final project, you will independently develop an instrument to measure students' learning from your group's game. This instrument should be aligned with the learning objectives of your game and could be comprised of closed-ended and/or open-ended items. If you choose to include open-ended items, you must also develop an easy-to-use scoring guide for these open-ended items. This instrument can be developed based on literature, standards documents, and/or by consulting subject-matter experts and/or teachers.

Due: see class schedule. 50 points

Final project add-on: Communication Teacher submission (minimum: 0, maximum: 1, 10%) *593A only*

This assignment is available only to graduate students registered in 593A, and is an add-on to the final project assignment. You will revise your group's final project submission for a submission to Communication Teacher. Per Communication Teacher guidelines, this article will be short (< 2000 words) and contain the following sections: (1) a brief title; (2) the course(s) for which the activity is intended; (3) the objective(s) for the activity; (4) a brief theoretical rationale for conducting the activity; (5) a description/explanation of the activity, including any preparation/preliminary steps and materials needed; (6) a debriefing paragraph, including typical results; (7) an appraisal of the activity, including any limitations or variations; and (8) references (see <http://www.tandfonline.com/action/authorSubmission?journalCode=rcmt20&page=instructions>). After your first revision, I will contribute substantively to the article and see it through to submission and revision with you. Therefore, barring exceptional circumstances, the author order will be you, me, followed by the rest of your group members.

Due: see class schedule. 100 points

GRADING SYSTEM and SCALE

This course is out of **1000 total points**. The following is a break-down of the grading system for the semester. For each assignment, you will be provided specific details concerning grading criteria. I do not diverge from the grade breakdown below, so be sure to calculate your final grade based on this chart (i.e., not on percentages or criteria used in other classes). Furthermore, I do not round or provide additional points. Undergraduate students enrolled in 493A will have the opportunity to earn extra credit (see below).

Assignment	Points Possible
a) In-class participation	200
b) Final project	300
c) Choose-your-own syllabus	500
TOTAL POINTS	1000

A = 1000-900

B = 899-800

C = 799-700

D = 699-600

F = 599-0

Week	Day	Topic	Reading(s) & Assignment(s)
1 (1/8–1/14)	Tues, 1/9	First day of class!	none
	Thurs, 1/11	<i>Red7</i> & 5-minute design jam	Watch: https://youtu.be/cTr7-94UkhM?t=1m50s (until 5:15) Read: <i>Red7</i> rules (basic rules only, pp. 1–5)
2 (1/15–1/21)	Tues, 1/16	What is learning? What are games?	1) Krathwohl, D. R. (2002). A revision of Bloom’s taxonomy: An overview. <i>Theory Into Practice</i> , 41, 212–218. doi:10.1207/s15430421tip4104_2 2) <i>A Model of Learning Objectives</i> 3) Juul, J. (2011). Video games and the classic game model. In <i>Half-real: Video games between real rules and fictional worlds</i> (pp. 23–54). Cambridge, MA: MIT Press. DUE: Position Paper 1 (prompts will be provided)
	Thurs, 1/18	<i>Splendor</i> & 10-minute design jam	1) Hunicke, R., Leblanc, M., & Zubek, R. (2004). MDA: A formal approach to game design and game research. In <i>Proceedings of the Challenges in Games AI Workshop, Nineteenth National Conference of Artificial Intelligence</i> . Watch: https://www.youtube.com/watch?v=0vMiddFxTJI Read: <i>Love Letter</i> rules: http://online.fliphtml5.com/mvgr/hyvg/#p=1 Play: <i>Love Letter</i> with peers: https://en.boardgamearena.com/#!/gamepanel?game=loveletter Watch: https://www.youtube.com/watch?v=2A0CQ0xsrv0 Read: <i>Splendor</i> rules DUE: 1-page write-up of one (1) additional type of card for (a) <i>Red7</i> (if not completed on 1/11) and (b) <i>Love Letter</i>
3 (1/22–1/28)	Tues, 1/23	Learning games per se	1) Campitelli, G., & Gobet, F. (2008). The role of practice in chess: A longitudinal study. <i>Learning and Individual Differences</i> , 18, 446–458. doi:10.1016/j.lindif.2007.11.006 2) Stafford, T., & Dewar, M. (2014). Tracing the trajectory of skill learning with a very large sample of online game players. <i>Psychological Science</i> , 25, 511–518. doi:10.1177/0956797613511466 * Leone, M. J., Fernandez Slezak, D., Cecchi, G. A., & Sigman, M. (2014). The geometry of expertise. <i>Frontiers in Psychology</i> , 5. doi:10.3389/fpsyg.2014.00047

Week	Day	Topic	Reading(s) & Assignment(s)
	Thurs, 1/25	<i>Covalence & Virulence</i>	<p>Add MDA notes for <i>Red7</i>, <i>Love Letter</i>, & <i>Splendor</i></p> <p>Watch: https://www.youtube.com/watch?v=-74FYj21JVg Read: <i>Carcassonne</i> rules Play: <i>Carcassonne</i> with peers 1+ times: https://en.boardgamearena.com/#!gamepanel?game=carcassonne & take MDA notes</p> <p>Watch: https://www.youtube.com/watch?v=OEX8L-ZvIHM Read: <i>Covalence</i> rules (base game only, pp. 1–8, 10)</p> <p>Watch: https://www.youtube.com/watch?v=YrpTENhn4v0 Read: <i>Virulence</i> rules (pp. 1–8, 10)</p> <p>DUE: 1-page design jam write-up</p>
4 (1/29–2/4)	Tues, 1/30	Games & learning theory 1: Foundations	<p>1) Gee, J. P. (2009). Deep learning properties of good digital games: How far can they go? In U. Ritterfeld, M. Cody, & P. Vorderer (Eds.), <i>Serious games: Mechanisms and effects</i> (pp. 67–82). New York, NY: Routledge.</p> <p>2) Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of game-based learning. <i>Educational Psychologist</i>, 50, 258–283. doi:10.1080/00461520.2015.1122533</p> <p>*Ackermann, E. (2001). Piaget’s constructivism, Papert’s constructionism: What’s the difference? In <i>Constructivism: Uses and perspectives in education</i> (pp. 85–94).</p>
	Thurs, 2/1	<i>Captain Sonar</i> & Co-op design jam	<p>1) Brathwaite, B., & Schreiber, I. (2009). <i>The basics</i>. In <i>Challenges for game designers: Non-digital exercises for video game designers</i> (pp. 1–24). Boston, MA: Course Technology.</p> <p>Watch: https://www.youtube.com/watch?v=5M_ZHyYLNuU Read: <i>Captain Sonar</i> rules</p>
5 (2/5–2/11)	Tues, 2/6	Games & learning theory 2: Model-based perspectives	<p>Play: <i>Crescent Loom</i> for 30+ minutes (keys will be provided) & take MDA notes</p> <p>Complete: <i>Crescent Loom</i> play experience survey https://www.surveymonkey.com/r/VFLX5NB</p> <p>1) Martinez-Garza, M. M., & Clark, D. B. (2017). Two systems, two stances: A novel theoretical framework for model-based learning in digital games. In P. Wouters & H. van Oostendorp (Eds.), <i>Instructional techniques to facilitate learning and motivation of serious games</i> (pp. 37–58). Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-39298-1_3</p> <p>2) McVeigh, D. P., Black, J., & Flimlin, G. (2008). How system simulations improve student learning by assisting in the creation of clear mental models. In K. McFerrin, R. Weber, R. Carlsen, & D. A. Willis (Eds.), <i>Proceedings of Society for Information Technology & Teacher Education International Conference 2008</i> (pp. 1767–1773). Chesapeake, VA: Association for the Advancement of Computing in Education.</p>

Week	Day	Topic	Reading(s) & Assignment(s)
			<p>* Siegler, R. S., & Ramani, G. B. (2009). Playing linear number board games—but not circular ones—improves low-income preschoolers’ numerical understanding. <i>Journal of Educational Psychology</i>, 101, 545–560. doi:10.1037/a0014239</p> <p>* Laski, E. V., & Siegler, R. S. (2014). Learning from number board games: You learn what you encode. <i>Developmental Psychology</i>, 50, 853–864. doi:10.1037/a0034321</p>
	Thurs, 2/8	Pandemic & Co-op revisions	<p>Watch: https://www.youtube.com/watch?v=JeJQWrocQnY</p> <p>Read: <i>Pandemic</i> rules</p>
6 (2/12–2/18)	Tues, 2/13	Games & learning theory 3: Transfer	<p>Play: <i>FreeCiv</i> (http://www.freeciv.org/) for 30+ minutes & take MDA notes</p> <p>1) Barnett, S. M. (2014). Virtual to real life: Assessing transfer of learning from video games. In F. C. Blumberg (Ed.), <i>Learning by playing: Video gaming in education</i> (pp. 15–28). New York, NY: Oxford University Press.</p> <p>2) Arena, D. (2012). Commercial video games as preparation for future learning. In C. Martin, A. Ochsner, & K. Squire (Eds.), <i>Proceedings of Games+Learning+Society 8.0</i> (pp. 68–73). Madison, WI: ETC Press.</p> <p>* Black, J. B., Khan, S. A., & Huang, S.-C. D. (2014). Video and computer games as grounding experiences for learning. In F. C. Blumberg (Ed.), <i>Learning by playing: Video gaming in education</i> (pp. 290–301). New York, NY: Oxford University Press.</p>
	Thurs, 2/15	<i>One Night Ultimate Werewolf & Spyfall</i>	<p>Watch: https://www.youtube.com/watch?v=XsP6LvZQpLk</p> <p>Read: <i>One Night Ultimate Werewolf</i> rules</p> <p>Watch: https://www.youtube.com/watch?v=GqLI6_UID88</p> <p>Read: <i>Spyfall</i> rules</p> <p>DUE: 1-page co-op design jam write-up</p>
7 (2/19–2/25)	Tues, 2/20	Social and communication games	<p>Play: <i>Quest Atlantis</i> for 15+ minutes (download: http://atlantisremixed.org/#61) & take MDA notes</p> <p>1) Jiménez, O. (2015). Leveraging the social aspect of educational games. <i>Theory Into Practice</i>, 54, 101–108. doi:10.1080/00405841.2015.1010845</p> <p>2) Tilton, S. (2015, November). <i>Winning through deception: A pedagogical case study on using social deception games to teach small group communication</i>. Paper presented at the annual meeting of the National Communication Association, Las Vegas, NV.</p> <p>* Plass, J. L., O’Keefe, P. A., Homer, B. D., Case, J., Hayward, E. O., Stein, M., & Perlin, K. (2013). The impact of individual, competitive, and collaborative mathematics game play on learning, performance, and motivation. <i>Journal of Educational Psychology</i>, 105, 1050–1066. doi:10.1037/a0032688</p>

Week	Day	Topic	Reading(s) & Assignment(s)
	Thurs, 2/22	<i>The Resistance: Avalon & Codenames</i>	Watch: https://www.youtube.com/watch?v=rXIK3NZjLGc Read: <i>The Resistance: Avalon</i> rules Watch: https://www.youtube.com/watch?v=zQVHkl8oQEU Read: <i>Codenames</i> rules (pp. 1–7) DUE: 1-page final project topic proposal
8 (2/26–3/4)	Tues, 2/27	Games and learner motivation	* Wouters, P., & van Oostendorp, H. (2017). Overview of instructional techniques to facilitate learning and motivation of serious games. In P. Wouters & H. van Oostendorp (Eds.), <i>Instructional techniques to facilitate learning and motivation of serious games</i> (pp. 1–16). Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-39298-1_1 1) Rodríguez-Aflecht, G., Hannula-Sormunen, M., McMullen, J., Jaakkola, T., & Lehtinen, E. (2017). Voluntary vs compulsory playing contexts: Motivational, cognitive, and game experience effects. <i>Simulation & Gaming</i> , 48, 36–55. doi:10.1177/1046878116673679 2) Lieberoth, A. (2015). Shallow gamification: Testing psychological effects of framing an activity as a game. <i>Games and Culture</i> , 10, 229–248. doi:10.1177/1555412014559978
	Thurs, 3/1	Final project design jam	
9 (3/5–3/11)	Tues, 3/6	Individual differences	1) Sherry, J. L. (2013). The challenge of audience reception: A developmental model for educational game engagement. <i>New Directions for Child and Adolescent Development</i> , 2013, 11–20. doi:10.1002/cad.20027 * Greenberg, B. S., Sherry, J., Lachlan, K., Lucas, K., & Holmstrom, A. (2010). Orientations to video games among gender and age groups. <i>Simulation & Gaming</i> , 41, 238–259. doi:10.1177/1046878108319930 Complete: <i>Board Game Motivation Profile</i> , explore your results, and note your primary motivation to discuss in class: https://apps.quantifoundry.com/surveys/start/tabletop/ 2) Yee, N. (2016, September 21). <i>The board game motivation profile (v2): Based on data from over 40,000 gamers</i> . Retrieved from http://quantifoundry.com/2016/09/21/board-game-profile-v2/ 3) Yee, N. (2017, April 27). <i>The primary motivations of board gamers: 7 takeaways</i> . Retrieved from http://quantifoundry.com/2017/04/27/board-gaming-motivations/
	Thurs, 3/8	Design day	DUE: Initial final project design document
10 (3/12–3/18)	Tues, 3/13		NO CLASS - SPRING RECESS
	Thurs, 3/15		NO CLASS - SPRING RECESS

Week	Day	Topic	Reading(s) & Assignment(s)
11 (3/19–3/25)	Tues, 3/20	Resources for learning from games 1: Repeated plays	1) Kopainsky, B., Alessi, S. M., Pedercini, M., & Davidsen, P. I. (2015). Effect of prior exploration as an instructional strategy for system dynamics. <i>Simulation & Gaming</i> , 46, 293–321. doi:10.1177/1046878113517536 2) Goldstone, R. L., & Son, J. Y. (2005). The transfer of scientific principles using concrete and idealized simulations. <i>Journal of the Learning Sciences</i> , 14, 69–110. doi:10.1207/s15327809jls1401_4 * Son, J. Y., & Goldstone, R. L. (2009). Fostering general transfer with specific simulations. <i>Pragmatics & Cognition</i> , 17, 1–42. doi:10.1075/pc.17.1.01son
	Thurs, 3/22	Design day	DUE: Revised prototype and design document
12 (3/26–4/1)	Tues, 3/27	Resources for learning from games 2: Failure	Download and play: <i>Electropocalypse</i> for 15+ minutes (Windows only: http://stratolab.com/electropocalypse/) & take MDA notes 1) Lorenzet, S. J., Salas, E., & Tannenbaum, S. I. (2005). Benefiting from mistakes: The impact of guided errors on learning, performance, and self-efficacy. <i>Human Resource Development Quarterly</i> , 16, 301–322. doi:10.1002/hrdq.1141 2) Lee, A., Liu, C., Jullamon, M., & Black, J. (2017). How'd that happen?! Failure in game spaces to prepare students for future learning. In K. E. H. Caldwell, S. Seyler, A. Ochsner, & C. Steinkuehler (Eds.), <i>GLS Conference Proceedings 2017</i> (pp. 119–128). Pittsburgh, PA: Carnegie Mellon ETC Press.
	Thurs, 3/29	Design day	DUE: Revised prototype and design document
13 (4/2–4/8)	Tues, 4/3	Resources for learning from games 3: Other players	Play: https://www.google.com/doodles/celebrating-50-years-of-kids-coding-to-completion (similar to the game in Weintrop & Wilensky, 2013) & take MDA notes Watch: http://cognitrn.psych.indiana.edu/CreatureGameClip.mov (video of the game in Wisdom et al., 2013) & take MDA notes 1) Weintrop, D., & Wilensky, U. (2013). Know your enemy: Learning from in-game opponents. In <i>Proceedings of the 12th International Conference on Interaction Design and Children</i> (pp. 408–411). New York, NY: Association for Computing Machinery. doi:10.1145/2485760.2485789 2) Wisdom, T. N., Song, X., & Goldstone, R. L. (2013). Social learning strategies in networked groups. <i>Cognitive Science</i> , 37, 1383–1425. doi:10.1111/cogs.12052
	Thurs, 4/5	External playtesting day	Teach your prototypes to visitors and solicit feedback DUE: Revised prototype and design document

Week	Day	Topic	Reading(s) & Assignment(s)
14 (4/9–4/15)	Tues, 4/10	Integrating games into classrooms 1: External scaffolds	Recall (or re-play!): <i>FreeCiv</i> 1) Charsky, D., & Ressler, W. (2011). “Games are made for fun”: Lessons on the effects of concept maps in the classroom use of computer games. <i>Computers & Education</i> , 56, 604–615. doi:10.1016/j.compedu.2010.10.001 2) Fiorella, L., & Mayer, R. E. (2012). Paper-based aids for learning with a computer-based game. <i>Journal of Educational Psychology</i> , 104, 1074–1082. doi:10.1037/a0028088 * Barzilai, S., & Blau, I. (2014). Scaffolding game-based learning: Impact on learning achievements, perceived learning, and game experiences. <i>Computers & Education</i> , 70, 65–79. doi:10.1016/j.compedu.2013.08.003
	Thurs, 4/12	NO CLASS - NERCSS	Use class time to meet with your group for final revisions and production of boardgame before Game Demo Day
15 (4/16–4/22)	Tues, 4/17	Flex day / Integrating games into classrooms 2: Instructions	1) Erhel, S., & Jamet, E. (2013). Digital game-based learning: Impact of instructions and feedback on motivation and learning effectiveness. <i>Computers & Education</i> , 67, 156–167. doi:10.1016/j.compedu.2013.02.019 2) Hawlitschek, A., & Joeckel, S. (2017). Increasing the effectiveness of digital educational games: The effects of a learning instruction on students’ learning, motivation and cognitive load. <i>Computers in Human Behavior</i> , 72, 79–86. doi:10.1016/j.chb.2017.01.040 * Nebel, S., Schneider, S., Schledjewski, J., & Rey, G. D. (2017). Goal-setting in educational video games: Comparing goal-setting theory and the goal-free effect. <i>Simulation & Gaming</i> , 48, 98–130. doi:10.1177/1046878116680869
	Thurs, 4/19	Game Demo Day	Showcase your games to visitors and solicit additional feedback DUE: Revised prototype and design document
16 (4/23–4/29)	Tues, 4/24	Flex day / Misc.	Play: <i>Play Your Way into Math</i> for 10+ minutes (http://www.projects.science.uu.nl/mathgame/zeldenrust/surprise.html) 1) Spangler, R. (2016, March 3). <i>What it feels like to think in a new way</i> . Retrieved from https://boardgamegeek.com/blogpost/51721/what-it-feels-think-new-way 2) Wouters, P., van Oostendorp, H., ter Vrugte, J., vanderCruysse, S., de Jong, T., & Elen, J. (2017). The effect of surprising events in a serious game on learning mathematics. <i>British Journal of Educational Technology</i> , 48, 860–877. doi:10.1111/bjet.12458
	Thurs, 4/26	NO CLASS - ECA	Use class time to meet with your group to complete final projects
Finals (4/30–5/4)	Mon, 4/30	NO CLASS - FINALS WEEK	DUE @ noon: Final project
	Tues, 5/1	NO CLASS - FINALS WEEK	DUE @ noon: Final project add-on: Print-ready files
	Wed, 5/2	NO CLASS - FINALS WEEK	DUE @ noon: Final project add-on: Learning measurement

Week	Day	Topic	Reading(s) & Assignment(s)
	Wed, 5/3	NO CLASS - FINALS WEEK	DUE @ noon: Final project add-on: Public relations
	Fri, 5/5	NO CLASS - FINALS WEEK	DUE @ noon: Final project add-on: Communication Teacher submission
ADDITIONAL RESOURCES			<p>Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. <i>Computers & Education</i>, 59, 661–686. doi:10.1016/j.compedu.2012.03.004</p> <p>Wouters, P., & van Oostendorp, H. (2013). A meta-analytic review of the role of instructional support in game-based learning. <i>Computers & Education</i>, 60, 412–425. doi:10.1016/j.compedu.2012.07.018</p> <p>Hainey, T., Connolly, T. M., Boyle, E. A., Wilson, A., & Razak, A. (2016). A systematic literature review of games-based learning empirical evidence in primary education. <i>Computers & Education</i>, 102, 202–223. doi:10.1016/j.compedu.2016.09.001</p> <p>Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., ... Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. <i>Computers & Education</i>, 94, 178–192. doi:10.1016/j.compedu.2015.11.003</p> <p>Vlachopoulos, D., & Makri, A. (2017). The effect of games and simulations on higher education: A systematic literature review. <i>International Journal of Educational Technology in Higher Education</i>, 14, 22. doi:10.1186/s41239-017-0062-1</p>

*Assigned to graduate students enrolled in 593A. *Optional* for undergraduates enrolled in 493A.

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