

**GDES 5386 Fundamentals of Game Design** 3 credits

Mondays & Wednesdays 8:30-10:25am, 336 McNeal

Professor

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Office Hours:

Wednesdays 10:30-11:30 and by appointment

**Course Description**

This course focuses on understanding games in all kinds of format: paper-based strategy games, electronic game, classic board game, etc. This course examines the theoretical and practical aspects of making games. Focuses will be placed on its designing rules, strategies, methodologies, and organizational structures, and the design process from the ground up. Further analysis and evaluate the elements that makes a game successful and how they function will be included. In addition, investigation on understanding design, interactivity, player's choice, action, and outcome, rule-making and rule-breaking, the social interaction, the story telling, the emotion that games invoke, and the meaning and ideology will be included. Other topics such as signs and cultural meaning, and visual representation will also be discussed.

**Objectives**

- to understand the fundamental concepts and principles for game design
- to investigate the game design process
- to bridge the theoretical and practical aspects of making games
- to establish a critical discourse on game design
- to create educational and user-centered games

**Student learning Outcomes**

*Can identify, define, and solve problems*

Students will learn the fundamental concepts and principles for game design through extensive readings and applied projects. Students will be assigned with weekly readings that address the fundamentals of game design (board game, computer game, card game, etc.). Students will then apply what they learned through readings and discussions on various game-related projects. For instance, in the change the rules project, each student will be required to select a board game and redesign some of the rules of the game. They also need to write a paper to describe how the changes of the rules affect the play of the game as compared to the original game.

**Attendance**

Attendance is absolutely essential and entirely your responsibility as are the consequences of your actions. Attendance for every class and staying for the entire class is required. The student is required to be on time for each class and is expected to work in class for the entire class period. If students arrive 30 minutes or more after class starts, it counts as an absence. Students with more than three absences will receive a reduction of two letter grades from their earned grade (i.e. an A becomes a C) and five absences will receive a F as the final grade.

**Incomplete**

There are no incompletes given in this class except for situations of extreme medical emergencies. An official letter from a physician must be submitted before an incomplete can be considered. Incompletes must be made up within the following semester, otherwise, an 'F' will be given. Design studio courses involve a considerable time commitment unlike other courses. The essential learning objectives for the course involve presence, participation, and design process. If more than 30% of these components is missed, it will not be possible to receive an incomplete or a passing grade.

<b>University Grading Standards</b>	<p>A - achievement that is outstanding relative to the level necessary to meet course requirements.</p> <p>B- achievement that is significantly above the level necessary to meet course requirements.</p> <p>C - achievement that meets the course requirements in every respect.</p> <p>D - achievement that is worthy of credit even though it fails to meet fully the course requirements.</p> <p>S - achievement that is satisfactory, which is equivalent to a C- or better (achievement required for an S is at the discretion of the instructor but may be no lower than a C-).</p> <p>F (or N) Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I.</p> <p>I (Incomplete) Assigned at the discretion of the instructor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. Requires a written agreement between instructor and student.</p>
<b>Credits and Workload</b>	<p>For undergraduate courses, one credit is defined as equivalent to an average of three hours of learning effort per week (over a full-semester) necessary for an average student to achieve an average grade in the course. For example, a student taking a three credit course that meets for three hours a week should expect to spend an additional six hours a week on coursework outside the classroom.</p>
<b>Classroom Conduct</b>	<p>All activities in the University, including this course, are governed by the university of Minnesota Student Conduct Code. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. In addition, students responsible for such behavior may be asked to cancel their registration (or have their registration canceled).</p>
<b>Scholastic Dishonesty and Student Conduct Code</b>	<p>Academic misconduct is defined as any act that violates the rights of another student with respect to academic work or involves misrepresentation of a student's own work. Academic misconduct includes but is not limited to: cheating on assignments or examinations, plagiarizing pieces of work, depriving others of necessary coursework, and sabotaging other's work. Discovery of academic misconduct is grounds for an "F" for the course.</p> <p>Visit <a href="http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf">http://www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf</a></p>
<b>Harassment</b>	<p>The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. Reports of harassment are taken seriously, and there are individuals and offices available for help.</p>
<b>Sexual Harassment</b>	<p>This policy governs the commitment to the prevention and awareness of and response to sexual harassment at the University of Minnesota (University). Visit <a href="http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf">http://www1.umn.edu/regents/policies/humanresources/SexHarassment.pdf</a></p>
<b>Expectations of Students</b>	<ul style="list-style-type: none"> <li>• Students are responsible for all class meetings and materials, including any information contained in the syllabus</li> <li>• Students are responsible for being on time and preparing for all class sessions</li> <li>• Students are responsible for meeting all course requirements, observing all deadlines, examination times, and other course procedures</li> <li>• Students are responsible for seeking help when needed</li> <li>• Students who need special accommodations are responsible for working with the instructor and the relevant University offices</li> <li>• Students may not make commercial use of their notes of lectures or University -provided materials without the express -written consent of the instructor</li> </ul>

<b>Academic freedom and responsibility</b>	Academic freedom is the freedom, without institutional discipline or restraint, to discuss all relevant matters in the classroom, to explore all avenues of scholarship, research, and creative expression, and to speak or write on matters of public concern as well as on matters related to professional duties and the functioning of the University. Academic responsibility implies the faithful performance of professional duties and obligations, the recognition of the demands of the scholarly enterprise, and the candor to make it clear that when one is speaking on matters of public interest, one is not speaking for the institution. <a href="http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf">http://www1.umn.edu/regents/policies/academic/Academic_Freedom.pdf</a>				
<b>Climate of inclusivity</b>	You are expected to be attentive during class, ask questions if you do not understand something, and to offer your opinion. You are also expected to listen respectfully to other students and to me when speaking. The University of Minnesota is committed to providing a safe climate for all students, faculty, and staff. All persons shall have equal access to its programs and facilities without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. I will happily honor your request at any point to address you by your correct name, gender pronoun, or any other manner you would like to be referred. If you like, I will also instruct class members to do the same. Please advise me of how you would like to be referred to in class. <a href="http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf">http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf</a>				
<b>Availability of Disability and Mental Health Services</b>	<p>The University of Minnesota is committed to providing all students equal access to learning opportunities. The Office of Equity and Diversity has a Disability Resource Center (DRC) that works with students who have disabilities to provide and/or arrange reasonable accommodations.</p> <ul style="list-style-type: none"> <li>• Students who have, or think they may have, a disability (e.g. mental health, attentional, learning, vision, hearing, physical or systemic), are invited to contact DRC to arrange a confidential discussion at 612- 626-1333 (V/TTY) or <a href="mailto:drc@umn.edu">drc@umn.edu</a>.</li> <li>• Students registered with DRC, who have a letter requesting accommodations, are encouraged to contact the instructor early in the semester to discuss accommodations outlined in their letter.</li> </ul> <p>For additional information please visit: <a href="https://diversity.umn.edu/disability/">https://diversity.umn.edu/disability/</a></p> <p>As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via <a href="http://www.mentalhealth.umn.edu">www.mentalhealth.umn.edu</a> or contact Counseling/Consulting Services at 612-624-3323.</p>				
<b>Academic Services</b>	<p>If you would like additional help, please contact one of the offices listed below.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Student Writing Support</td> <td><a href="http://writing.umn.edu/sws/index.html">http://writing.umn.edu/sws/index.html</a></td> </tr> <tr> <td>Student Academic Success Service</td> <td><a href="http://www.uccs.umn.edu/">http://www.uccs.umn.edu/</a></td> </tr> </table>	Student Writing Support	<a href="http://writing.umn.edu/sws/index.html">http://writing.umn.edu/sws/index.html</a>	Student Academic Success Service	<a href="http://www.uccs.umn.edu/">http://www.uccs.umn.edu/</a>
Student Writing Support	<a href="http://writing.umn.edu/sws/index.html">http://writing.umn.edu/sws/index.html</a>				
Student Academic Success Service	<a href="http://www.uccs.umn.edu/">http://www.uccs.umn.edu/</a>				
<b>Use of Class Notes and Materials</b>	Visit <a href="http://policy.umn.edu/Policies/Education/Education/CLASSNOTESSTUDENTS.html">http://policy.umn.edu/Policies/Education/Education/CLASSNOTESSTUDENTS.html</a>				
<b>Personal Electronic Devices in Classroom</b>	No cell phone is allowed in the classroom. Visit <a href="http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html">http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html</a>				
<b>Accepting and Returning Assignments</b>	You will turn in your assignments directly to me during class time. Assignments will be returned from me. Please don't drop off any work at the DHA front desk.				
<b>Makeup work for legitimate absences</b>	Please contact your instructor for meeting your course work requirement and alternative due dates. Visit <a href="http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html">http://www.policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html</a>				

**Late Project Policy** The student is required to complete all class assignments, and present them on time. Projects, which are one class period late, will be marked down two letter grades. After that time projects will not be graded except for extraordinary circumstances. If you have a problem completing the work on schedule, please see your instructor about alternative means of meeting your course obligation. Should such arrangements be made, it does not release you from any of the assignments required by this course. You will be given as much class time as possible to work on your assignments with your instructor in class. Late work will not be accepted.

**Extra credit options** There is no extra credit option for this class.

**Release of Work Statement** Students understand that enrollment in this course grants consent for their work to be selected for inclusion in college or departmental publications (online or in print). Your instructor may select to use your work to represent her/his skills as an instructor in a teaching portfolio (online or in print).

**Critiques/Play Testing** There will be regular critiques and play testing. You are required to attend whether or not your own work is ready for critique/play testing. You are expected to critique your own work as well as the work of your peers.

**Materials & Expenses** The student is required to bring all of the necessary materials for working on assignments to each class meeting. All final comps need to be very tight and of portfolio quality. The estimated cost for necessary material may be between \$20-\$50.00 for the semester. Final work must be presented in a neat, professional format. Poorly presented work will lower your grade.

**Journal** Maintain a professional journal that contains all of your research, work in progress, etc.... in an easily accessible presentation that shows the sequence of your work. Document all your brain storms, questions, research, and findings, sketches, problems, type and color studies, etc... in short document and save all materials gathered as part of your project. Consider how to organize, plan and present this material professionally. Make it easy to go through, with work labeled clearly. Bring this Journal or your "rough working" journal to every class ( 20 points).

**Course Evaluation** Students will be required to complete all class assignments. Design work will be evaluated on concept, idea development, research, design process, class participation, execution, craftsmanship, and presentation skills. (See the attached date-specific course outline and schedule). Final course grade will be distributed on a point/percentage system:

• Assignment 1: Change the Rule	70 points	Grading: Out of the 400 possible points 93%/ 372 points and above = A 90%/360 points and above = A-
• Assignment 2: Change the Play	70 points	
• Assignment 3: Board Game/Digital game	220 points	85%/340 points and above = B+
		80%/320 points and above = B
		77%/308 points and above =B-
		73%/292 points and above =C+
• Discussion	20 points	70%/280 points and above =C
• Journal	20 points	67%/268 points and above =C-
		63%/252 points and above =D+
		60%/240 points and above =D
		Below 240 points =F

\* Please note: ALL assignments must be turned in to receive a final grade. One missing assignment will automatically result in an "F" as the final course grade.

**Course Text** Salen, K., & Zimmerman, E. (2004). Rules of Play: Game Design Fundamentals. The MIT Press.

- Game Time** For the first four lessons, each of you will have a chance to bring a game and to share and play with your group. It could be a board game, a card game, a computer game, or any other form of game.
- Discussion Leaders** Each of you have been assigned in a group to lead a discussion on a particular day with the assigned readings. Please see class schedule on your assigned day ( 20 points). Each group consists of 3-4 students. Your group will need to decide who will read/lead certain part of the reading. Each group will also need to generate at least 3 questions (based on the readings) you would like to ask during the whole class discussion time.
- Course Outline** This course outline is tentative and subject to change depending on the progress of the class. Staying on track is essential to completing your projects. If your final projects are not completed as per final specifications, you will receive a lower grade.

Week	Date	Agenda
1	W 1.22	Introduction of course, go through syllabus. Propose a new game.
2	M 1.27	Discussion of reading (An, Carpenter, Epstein). Readings: Commissioned essay pp.22-27; Meaningful play 31-37. Game time.
2	W 1.29	Discussion of reading (Basinski, Foor, Kuehn, Price). Readings: Understanding semiotics 40-46, Systems 49-55. Interactivity 57-69, commissioned game 1 pp.106-115. Game time.
3	M 2.3	Discussion of reading (Bui, Delisi, Scott, Rockcastle)). Readings: Defining games 71-83, Defining digital games 85-91, The magic circle 93-99, The primary schemas 101-105. Game time.
3	W 2.5	Discussion of reading (Seo, Palmer, LeMire, Hamburg). Readings: Defining Rules 117-149, Uncertainty 173-189, Commissioned game 2 pp.286-297. Discussion of assignment 1. Game time.
4	M 2.10	Discussion of reading (Corpe, Finn, Johnston). Readings: Games as system of information 203-211, Game as game theory systems 231-245, Games as systems of conflict 249-265; Commissioned game 3 pp.490-501.
4	W 2.12	Assignment 1 step 1 due. Assignment 1 rough stage working session. Discussion of reading ( Harder, Philaphandeth, Sousa). Defining play 301-311, Games as the play of experience 313-327, Games as the play of pleasure 360-361 (summary); Games as the play of meaning 374 (summary). Assignment 1 rough stage due.
5	M 2.17	Discussion of reading (Osiecki, Samuelsson, Tsai): Games as narrative play 377-419. Second stage: Assignment 1 play testing. Working session.
5	W 2.19	Discussion of reading (Wallinga, Xiong, Jablonski). Readings: Games as the play of simulation 457-458 (summary), Games as social play pp.461-489. Assignment 1 play testing continues.
6	M 2.24	Discussion of reading (Phouisangiem, Hilmes, Kadadah): Readings: Defining culture 505-513, Commissioned game 4 pp.588-601. Discussion of assignment 2.
6	W 2..26	Assignment 2 step 1 due. Assignment 2 rough stage working session.
7	M 3.2	Assignment 2 rough stage due. Working session assignment 2.
7	W 3.4	Second stage: Assignment 2 play testing. <u>Assignment 1 due.</u>
8	M 3.16	Assignment 2 play testing continues.
8	W 3.18	Discussion of assignments 3. Working session assignment 2.
9	M 3.23	<u>Assignments 2 due.</u> Assignment 3 working session.
9	W 3.25	Assignment 3 step 1 due. Presentation. Assignment 3 Rough stage working session.
10	M 3.30	Assignment 3 Rough stage due. Critique. Working session.
10	W 4.1	Working session assignment 3.
11	M 4.6	First play testing assignment 3.
11	W 4.8	First Play testing assignment 3.
12	M 4.13	Revise/refine stage assignment 3
12	W 4.15	Revise /refine stage assignment 3
13	M 4.20	Second play testing assignment 3.
13	W 4.22	Second play testing assignment 3.
14	M 4.27	Final creation assignment 3.
14	W 4.29	Final creation.
15	M 5.4	<u>Assignment 3 due.</u> Play time. Journal due.

## Assignment One: Change the Rules [limits to 1-3]

Select a board game and redesign some of the rules of the game. Write a paper (minimum of 2 pages) to describe how the changes of the rules affect the play of the game as compared to the original game. Scope of the paper should include discussions on changes of objectives, interactivity, player's choice, action, emotion, meaning of the game, and outcome. Keep in mind that you are only allowed to change the rules of the games, all physical properties of the game should maintain the same (no addition or elimination).

\* Graduate students: 3 pages minimum for the paper.

### Design Process

Step 1: Select a game and examine the mission statement/objective and the rules of the game. Due 2.10.

Rough Stage: A minimum of 2 directions are required. Ideas can be presented through drawings or writings. Group critique. Due 2.12.

Second stage: Play testing. Test the one solution that is selected from the rough stage. Take note and include the observation in your paper. 2.17 or 19.

Final stage: The set of rules should be typed and assembled in a professional way. Consider the overall design elements of the game and try to maintain the similar "look" for the Set of Rules piece. Turn in the whole set of the game. Be creative. Due 3.4.

\* Paper also due on 3.4

Questions to consider/Observations:

1. Is the game accomplishing it's original goals?
2. Do the players understand what they are supposed to be doing?
3. Are players having fun? Describe their experience.
4. Do players want to play again?
5. Compare to the original rules, how successful are the new rules?

## Assignment Two: Change the Play [physical attribute]

Select a board game and change the game materials of the game. Write a paper (minimum of 2 pages) to describe how the changes of the materials affect the play of the game as compared to the original game. Scope of the paper should include discussions on changes of objectives, interactivity, player's choice, action, emotion, meaning of the game, and outcome. Keep in mind that you are NOT allowed to change the rules of the games, but on the *physical attribute* of the game. Reference : Chapter 23.

\* Graduate students: 3 pages minimum for the paper.

### Design Process

Step 1: Select a game and examine the mission statement/objective and the rules of the game.  
Due 2.26.

First Stage: A minimum of 2 directions are required. Ideas can be presented through drawings or writings. Critique. Due 3.2

Second stage: Play testing. Test the one solution that is selected from the rough stage. Take note and include the observation in your paper. 3.4 or 16

Final stage: All the physical attributes should be assembled in a professional way. Turn in the whole set of game. Be creative.  
Due 3.23.

\* Paper also due on 3.23

# Option 1

## Assignment Three: Computer Game Design

Create and design a digital game. Focus of the game should be educational and positive. Educational doesn't mean it has to be for classroom usage. For instance, it could be a game to promote motor skills. You can build your game based on your technical skills. You can use open source game engine, etc. However, you have to make sure I (and your classmates) will be able to play test and review your final game.

### Limitations

Drawings can be done in Illustrator/Photoshop. Scanning images is allowed if it is necessary. There is no limitation on the size of the game. There are two parts for the computer game. The first part should include and explain the objectives, rules, and outcome of the game. The second part should contain the game itself.

### Design Process

Step 1: Write a narrative for the game. Define the audience, objectives, and general rules for the game. A minimum of 2 pages.  
Due 3.25

Rough stage: Create 2 rough prototypes for the game. The prototypes should be differentiated by either the rules or the physical components of the game. The prototypes can be done by hand or on the computer.  
Due 3.30

Second stage: Play testing. Test the one solution (prototype) that is selected from the rough stage. The game has to be testable at this stage, that means you need to include the general rules, some physical components of the game (remember, just roughs). Take notes and include the observation in your journal. 4.6 & 4.8

Third stage: Revise the game based on the first play testing 4.13, & 4.15.

Fourth stage: Second play testing. Take notes and include the observation in your journal.  
4.20 & 4.22

Final stage: Revise the game based on the second play testing. The final game must be produced as realistic as possible. Due 5.4

\* Undergraduate students: No paper is required.

\*Graduate students: A minimum of a 3-page paper is required to describe your game.

In addition, a minimum of a 5-page theoretical essay based on the review of recent journal research articles in gaming is required.



## Option 2

### Assignment Three: Design a new board game

Create, design, and construct a board game for you chosen audience.

#### Limitations

Drawings can be done in Illustrator. Scanning images is allowed if it is necessary. There is no limitation on the size of the game. Be creative. Remember to include all the necessary written materials (rules, how to play, etc.) for the board game. All physical components of the game should be constructed and created.

#### Design Process

Step 1: Write a narrative for the game. Define the audience, objectives, and general rules for the game. A minimum of 2 pages.

Due 3.25

Rough stage: Create 2 rough prototypes for the game. The prototypes should be differentiated by either the rules or the physical components of the game. The prototypes can be done by hand or on the computer.

Due 3.30

Second stage: Play testing. Test the one solution (prototype) that is selected from the rough stage. The game has to be testable at this stage, that means you need to include the general rules, some physical components of the game (remember, just roughs). Take notes and include the observation in your journal. 4.6 & 4.8

Third stage: Revise the game based on the first play testing 4.13, & 4.15.

Fourth stage: Second play testing. Take notes and include the observation in your journal. 4.20 & 4.22

Final stage: Revise the game based on the second play testing. The final game must be constructed, assembled, and produced as realistic as possible. Pay attention on your craftsmanship. 5.4

\* Undergraduate students: No paper is required.

\*Graduate students: A minimum of a 3-page paper is required to describe your game.

In addition, a minimum of a 5-page theoretical essay based on the review of recent journal research articles in gaming is required.