

ITT Technical Institute
GD330
Game Design Process
Onsite Course

SYLLABUS

Credit hours: 4

Contact/Instructional hours: 50 (30 Theory Hours, 20 Lab Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisites: GD300 Introduction to Gaming Technology, GD310 Managing Game Development

Course Description:

This course introduces issues inherent in the process of game design. Topics of instruction include the skills and tools needed for story and character development, game design, pre-production, prototyping, testing, end-user testing, human interface, content development and communication documents.

SYLLABUS: Game Design Process

Instructor: _____

Office hours: _____

Class hours: _____

Major Instructional Areas

Unit 1

Chapter 1: What is Game Design?

Key elements of games

Types of design documents

Attributes of game designers

Unit 2

Chapter 2: Game Concepts

Definition of a game

Inspiration

Player's role

Modes and structure

Realism

Story

Audience

Genre

Unit 3

Chapter 3: Game Settings and Worlds

Game settings

Game world dimensions

Chapter 4: Storytelling and Narrative

Purpose of stories

Structure of stories

Role of narrative

Chapter 5: Character Development

Character design
Character arcs
Character archetypes

Unit

4

Chapter 6: Creating the User Experience

Aspects of user experience
Evolution of game interfaces
Components of the user experience
Guidelines for interaction
Issues of audio and visual design

Unit 5

Chapter 7: Gameplay

Definition of gameplay
Types of challenges
Synthesizing challenges
Applied challenges

Unit 6

Chapter 8: The Internal Economy of Games and Game Balancing

Game balance
Payoff matrices
Symmetry
Transition and intransitive relationships
Emergence
Feedback loops
Goals and tools for balancing

Unit 7

Chapter 9: Action Games

Types of action games

Design elements of action games

Victory conditions of action games

Interaction models of action games

Design considerations of action games

Chapter 10: Strategy Games

Types of strategy games

Design elements of strategy games

Victory conditions of strategy games

Interaction models of strategy games

Design considerations of strategy games

Chapter 11: Role-Playing Games

Types of role-playing games

Design elements of role-playing games

Victory conditions of role-playing games

Interaction models of role-playing games

Design considerations of role-playing games

Chapter 15: Adventure Games

Types of adventure games

Design elements of adventure games

Victory conditions of adventure games

Interaction models of adventure games

Design considerations of adventure games

Unit 8

Chapter 12: Sports Games

Design elements of sports games

Design considerations of sports games

Artificial intelligence states and goal-setting

Chapter 13: Vehicle Simulations

Design elements of vehicle simulations.

Design considerations of vehicle simulations.

Chapter 14: Construction and Management Simulations

Design elements of construction and management simulations.

Design considerations of construction and management simulations.

Hybrid aspects of simulations

Unit 9

Chapter 16: Artificial Life, Puzzle Games, and Other Genres

Elements of artificial life games

Definition of puzzle games

Developing games for girls

Chapter 17: Online Games

Design issues of online games

Techniques for designing puzzles

Chapter 18: The Future of Gaming

Design considerations of games in the future

Unit 10

Appendix A: Sample Design Documents

Purpose of design documents

Types of design documents

Features of design documents

Unit 11

Review and Final Examination

Review session

Final examination

Course Objectives

After successful completion of this course, the student will be able to:

1. Identify the components of a game concept.
2. Develop a game concept.
3. Identify the components of a game proposal and the considerations for presenting a proposal.
4. Prepare a game proposal.
5. Identify the considerations involved in character design.
6. Identify the components of a game design document.
7. Create a template for game design document.
8. Identify the documents needed during the life cycle of game development.

Related SCANS Objectives

1. Assess self accurately, set personal goals, monitor progress, and exhibit self-control.
2. Assess and communicate skills giving concrete examples.
3. Use imagination freely, combines ideas or information in new ways, make connections between seemingly unrelated ideas, and reshape goals in ways that reveal new possibilities.
4. Demonstrate creative thinking processes by generating new ideas or original combination of ideas.
5. Communicate thoughts, ideas, information, and messages.
6. Select and analyze information and communicate the results to others using oral, written, graphic, pictorial, or multi-media methods.
7. Assess learning styles and determine the most effective and efficient method of learning or teaching.
8. Specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
9. Suggest modifications to existing systems and develop new or alternative systems to improve performance.
10. Recognize a discrepancy between what is and what should or could be, identifies possible reasons for the discrepancy, and devise and implement a plan of action to resolve it. Evaluate and monitors progress, and revise plan as indicated by findings.
11. Use logic to draw conclusions from available information, extract rules or principles from a set of objects or written text; apply rules and principles to a new situation, or determine which conclusions are correct when given a set of facts and a set of conclusions.
12. Through detailed analysis and the use of sound logic, demonstrate critical thinking skills.
13. Recognize and explain trends in technological change and deduce how the change will impact the status quo.
14. Formulate, communicate ideas to justify positions, and to persuade and convince others.
15. Check, edit, and revise for correct information, placing appropriate emphasis, form, grammar, spelling, and punctuation.
16. In a simulation, work cooperatively and communicate clearly with clients and customers to satisfy their expectations.

Teaching Strategies

The curriculum is designed to promote a variety of teaching strategies that support the outcomes described in the course objectives and that foster higher cognitive skills. Delivery makes use of various media and delivery tools in the classroom.

Course Resources

Student Textbook Package

- Rollings, A., & Adams, E. (2012). *Andrew rollings and Ernest adams on game design* (Custom ed.). Boston, MA: Pearson Custom

References and Resources

ITT Tech Virtual Library

Login to the ITT Tech Virtual Library (<http://www.library.itt-tech.edu/>) to access online books, journals, and other reference resources selected to support ITT Tech curricula.

- **General References**
 - >Reference Resources>Encyclopedias>Britannica Online
 - >Reference Resources>Arts>ArtLex: A Dictionary of Visual Art

- **>Program Links>Professional Organizations**
International Game Developers Association
- **>Program Links>Recommended Links**
The Art of Computer Game Design

1. Books

The following books are related to this course and are available through the ITT Tech Virtual Library

- Tracy, Fullerton and Christopher Swain and Steven Hoffman. *Game Design Workshop: Designing, Prototyping, and Playtesting Games*. CMP Books, 2004.
- Salen, Katie and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. The MIT Press, 2004.
- Bates, Bob. *Game Design, Second Edition*. Boston: Thomson Course Technology, 2004.
- Koster, Raph. *Theory of Fun for Game Design*. Arizona: Paraglyph Press, 2005.
- Pardew, Les and Ross Wolfley and Eric Nunamaker and Scott Pugh. *Game Design for Teens*. Boston: Thomson Course Technology, 2004.

2. Periodicals

- Periodicals>EbscoHost

■ Other Resources

www.Gamasutra.com
GameDev.net

All links to web references outside of the virtual library are always subject to change without prior notice.

Evaluation & Grading

COURSE REQUIREMENTS

1. **Attendance and Participation**

Regular attendance and participation are essential for satisfactory progress in this course.

2. **Completed Assignments**

Each student is responsible for completing all assignments on time.

3. **Team Participation (if applicable)**

Each student is responsible for participating in team assignments and for completing the delegated task. Each team member must honestly evaluate the contributions by all members of their respective teams

Evaluation Criteria Table

The final grade will be based on the following weighted categories:

CATEGORY	WEIGHT
Assignments	20%
Lab Assignments	20%
Final Exam	35%

Participation	25%
Total	100%

Grade Conversion Table

Final grades will be calculated from the percentages earned in class as follows:

A	90 - 100%	4.0
B+	85 - 89%	3.5
B	80 - 84%	3.0
C+	75 - 79%	2.5
C	70 - 74%	2.0
D+	65 - 69%	1.5
D	60 - 64%	1.0
F	<60%	0.0

Course Outline

Wk	Lsn	Lesson Title	Reading	Assessment	
				Writing Assignment	Quiz
1	1	What is Game Design?	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 1, Page 3 - 27	x	
2	1	Game Concepts	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 2 Page 29 - 53	x	
3	1	Game Settings and Worlds	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 3 Page 55 - 87	x	
	2	Storytelling and Narrative	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 4 Page 89 - 119	x	
	3	Character Development	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 5 Page 121 - 145	x	
4	1	Creating the User Experience	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 6 Page 147-198	x	
5	1	Gameplay	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 7 Page 199-238	x	
6	1	The Internal Economy of Games and Game Balancing	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 8 Page 239-286	x	

7	1	Action Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 9 Page 289-320	x	
	2	Strategy Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 10 Page 321-346	x	
	3	Role-Playing Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 11 Page 347-370	x	
	4	Adventure Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 15 Page 443-476	x	
8	1	Sports Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 12 Page 371-394	x	
	2	Vehicle Simulations	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 13 Page 395-416	x	
	3	Construction and Management Simulations	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 14 Page 417-440	x	
9	1	Artificial Life, Puzzle Games, and Other Genres	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 16 Page 477-498	x	
	2	Online Games	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 17 Page 499-532	x	
	3	The Future of Gaming	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Chapter 17 Page 533-566	x	
10	1	Design Documents	Rollings, Andrew and Ernest Adams. <i>Andrew Rollings and Ernest Adams on Game Design</i> Appendix A Sample Design Documents Page 569-587	x	
11	Final Examination				

Intent/Interface

This course is an in-depth examination of the purpose and design of game rules. While the prior courses, GD300 Introduction to Gaming Technology and GD310 Managing Game Development, provided an overview of genres and game components, this course will explore these areas in detail. The emphasis will be on the theory behind game design decisions. The next course in the sequence, GD350 Game Design Strategies, will put these theories into practice.