BUTTE COLLEGE
COURSE OUTLINE

I. CATALOG DESCRIPTION

CSCI 11 - Introduction to Game Design and Development   **3 Unit(s)**

Prerequisite(s): NONE
Recommended Prep: Reading Level IV; English Level IV; Math Level III

Transfer Status: CSU/UC
34 hours Lecture
51 hours Lab

This course is an introduction to the concepts, technologies, and techniques of game design and development. The course covers the history of games, basic game theory, the phases of game development, the use of computers and other media in the development of games, and game testing and analysis. Students will explore the ethical and social issues associated with the design, production, and marketing of games. The course emphasizes the importance of teamwork in, and the interdisciplinary nature of, the games industry.

II. OBJECTIVES

Upon successful completion of this course, the student will be able to:
- A. Describe the role of the game designer in the game development process
- B. List and describe the formal and dramatic elements that comprise a well-designed game
- C. Conceptualize and refine an idea for a game
- D. Produce prototypes for games using computers and other media
- E. Design and conduct a playtesting session for a game concept
- F. Analyze a game design for completeness, correctness, balance, and fun
- G. Describe the roles of the members of a game development team
- H. Define the stages of game development
- I. Produce a formal design document for a game
- J. List and describe the major genres, developers, and publishers of games

III. COURSE CONTENT

A. Unit Titles/Suggested Time Schedule

Lecture

Topics	Hours
1. History of Games	2.00
2. Game Design: Teamwork and Communication	2.00
3. Introduction to the Game Design Process	2.00
4. The Structure of Games	2.00
5. Formal Elements of Games	2.00
6. Dramatic Elements of Games	2.00
7. Developing a Game Concept	2.00
8. Building a Game Design Team	2.00
9. Game Prototyping	4.00
10. Techniques for Playtesting	2.00
11. Game Design Analysis: Fun and Functionality	4.00
12. Game Design Document	4.00
13. Stages of Game Development	2.00

14. The Game Industry		2.00
Total Hours		34.00

Lab

Topics	Hours
1. Team Building: Identifying Roles	3.00
2. Good Games and Bad Games	3.00
3. Team Building: Finalizing a Formal Contract	3.00
4. Structure and Elements of Games	6.00
5. Game Conceptualization	6.00
6. Game Prototyping	6.00
7. Playtesting	12.00
8. Game Design Document	12.00
Total Hours	51.00

IV. **METHODS OF INSTRUCTION**
    A. Lecture
    B. Collaborative Group Work
    C. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
    D. Demonstrations
    E. Reading Assignments
    F. Multimedia Presentations

V. **METHODS OF EVALUATION**
    A. Oral Presentation
    B. Demonstration
    C. Class participation
    D. Lab Projects
    E. Written Assignments

VI. **EXAMPLES OF ASSIGNMENTS**
    A. Reading Assignments
        1. Read the article "MDA: A Formal Approach to Game Design and Game Research" provided by the instructor. Make a list of common game mechanics (as defined in the article) to share in group discussion.
        2. Read the chapter in your text on the formal elements of video games. Be prepared to discuss game objectives as categorized in your text.
    B. Writing Assignments
        1. Using the template provided by the instructor, complete a formal written review of a platformer video game. Submit your review to the instructor and be prepared to present a brief summary to the class.
        2. Prepare a one page summary ("one-sheet") for a game design proposal. Your document must include: target audience, target platform, core mechanics, genre, similar games, and a "hook" statement. Be prepared to present your game design to the class.
    C. Out-of-Class Assignments
        1. Play several games of tic-tac-toe with a friend, family member, or classmate. Write down your ideas for three mechanics that could be added to tic-tac-toe to alter or eliminate the

optimal strategy. Be prepared to conduct a play-through of tic-tac-toe in class using each of your new mechancis.

2. Select two video games from the list provided by the instructor and play each for a minimum of one hour. As you play, pay particular attention to the level design in each game, and record your thoughts about the quality of the level design in each game. Be prepared to share your thoughts with your team during lab.

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

Textbooks:
    A. Schell, Jesse. The Art of Game Design: A Book of Lenses. 2nd Edition. A K Peters/CRC Press, 2014.
    B. Brathwaite, Brenda and Schreiber, Ian. Challenges for Game Designers. 1st Edition. Charles River Media, 2009.
    C. Fullerton, Tracy. Game Design Workshop: A Playcentric Approach to Creating Innovative Games. 3rd Edition. A K Peters/CRC Press, 2014.

Materials Other Than Textbooks:
    A. Supplies: USB thumb drive - 2G minimum

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