

## SYLLABUS

**DIVISION:** Business and Engineering Technology

**REVISED:** Fall 2014

**CURRICULA IN WHICH COURSE IS TAUGHT:** Gaming and Mobile App

**COURSE NUMBER AND TITLE:** ITP 160 – Introduction to game Design and Development

**CREDIT HOURS:** 3 **HOURS/WK LEC:** 3 **HOURS/WK LAB:** 0 **LEC/LAB COMB:** 3

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**I. CATALOG DESCRIPTION:** Introduces object-oriented game design and development. Provides overview of the electronic game design and development process and underlines the historical context, content creation strategies, game careers, and future trends in the industry. Utilizes a game language environment to introduce game design, object-oriented paradigms, software design, software development and product testing. Teaches skills of writing a game design document and creating a game with several levels and objects. Integrate 2D animations, 3D models, sound effects, and background music as well as graphic backgrounds.

**I. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:**

- Acquire an understanding of game creation and development
- Understand the history of computers dealing with game development
- Gain a working knowledge of games on the market
- Include ideas of development, marketing and production

**II. REQUIRED BACKGROUND:** MTE 1, MTE 2, ENG 1, ENG 3

**IV. COURSE CONTENT:**

- Game design
- Game development
- Game history
- Content creation strategies
- Game careers
- Future trends in gaming
- Write game documentation
- Creating games
- 2D and 3D games
- Sound effects
- Background music

**V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE.**

  X   Communication  
      Cultural and Social Understanding  
      Personal Development  
      Scientific Reasoning

  X   Critical Thinking  
  X   Information Literacy  
  X   Quantitative Reasoning

## VI. LEARNER OUTCOMES

## VII. EVALUATION

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| <b>Game Program introduction</b> <ul style="list-style-type: none"><li>• Understand the place of program analysis and design within the system development life cycle</li><li>• Understand the evolution and development of both programming languages and program design</li><li>• Describe the difference between a design notational language and a design tool</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Lab exercises<br>In class assignments<br>Written test |
| <b>Game Design and implementation</b> <ul style="list-style-type: none"><li>• Understand how to design and implement games and the type of audience you are targeting.</li><li>• Understand the history of game design</li><li>• Character creation</li><li>• Understand the experience of playing a game</li><li>• Understand of game interfaces</li><li>• Understand audio content in a game</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Lab exercises<br>In class assignments<br>Written test |
| <b>Structured design introduction</b> <ul style="list-style-type: none"><li>• Describe a reasonable design process for structured program design.</li><li>• Identify one or more appropriate notational languages (such as pseudocode) and tools for structured design.</li><li>• Implement sequence, selection, and loop structures within a structured design solution for an operation.</li><li>• Implement nullELSE selections, nested selections, and CASE structures within a structured design solution for an operation.</li><li>• Implement WHILE, UNTIL, FOR loops, and nested loops within a structured design solution for an operation.</li><li>• Implement structured design solutions that involve one operation calling other operations within the same class and in other classes with received and returned arguments.</li><li>• Object Model to manipulate the web browser</li><li>• Understand and use the Document Object Model</li></ul> | Lab exercises<br>In class assignments<br>Written test |
| <b>Marketing and Production</b> <ul style="list-style-type: none"><li>• Understand the process of production</li><li>• Management of games</li><li>• Understand the Maintenance of games</li><li>• Understand Community of games</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Lab exercises<br>In class assignments<br>Written test |
| <b>Cooperative team work</b> <ul style="list-style-type: none"><li>• Work as a member of a design team on a given design task.</li><li>• Work on a single task of a design project while other teams or individuals are working on separate tasks of the same project</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lab exercises<br>In class assignments<br>Written test |

