NJIT

NEW JERSEY INSTITUTE OF TECHNOLOGY
COLLEGE OF ARCHITECTURE AND DESIGN

GAME PROPOSAL & ENVIRONMENT/HISTORY OF GAMES

COURSE: DD 275 – History of Games (3 credits)
PROGRAM: Digital Design/School of Art + Design
LOCATION: Second-year/fall term (undergraduate)
INSTRUCTOR: Taro Narahara

DESCRIPTION: The course is a guided exploration through the world of games. Students experiment, play, and analyze various aspects of games – from early traditional games to current generation electronically-mediated games; from individual games to collaborative online games. Formats for electronic games from proprietary consoles to open source mobile platforms are studied. Game types will be analyzed with particular attention paid to the virtual environments in which these games take place. The expressive and persuasive aspects of games will also be explored.

PROJECT: In the final project, students are given a variety of options from which to choose. They may create artistic 2D and/or 3D representations based on an original concept for environment, characters, and/or assets. Alternatively, they may create interactive-based content using game engines based on original design proposals which may include the use of programming skills. The final option is the creation of a physical game utilizing digital fabrication methods and assemblies. Storyboard of gameplay when relevant is also required.

REQUIREMENTS: A series of analytical and creative tasks are undertaken throughout the semester, starting with an analysis of traditional games covering a variety of genres, from sports games to strategy war games. Subsequently game structures, environments, characters, props/tools, etc. are all studied. The course includes two creative projects. The first, students are asked to create original digital environments using game engine software. At the end of the semester, students are given the opportunity to select from a wide range of options for a final project that relates to digital interactive game play. The options include the development of a game and character or environment based on a non-game literary/narrative or other source.

Final submission includes storyboards and preliminary sketches for the proposed game, story/script, analysis and narrative description of game structure, 3D model(s) (created in either *Autodesk 3DS Max* or *Autodesk Maya*) of environment and/or character(s), screen captures showing development of 3D model, and a series of sequential renderings (three to ten still images) illustrating key views/perspectives of the environment(s) and/or positions and costumes/apparel for the character(s). Screen captures of process work must also be submitted.

COURSE OBJECTIVES: (1) To gain perspectives and understanding about the history of both traditional and non-traditional (digital) games. (2) To provide exposure to principles of game structures including concepts, such as abstract strategy games, game tree, and state space through simple game examples. (3) To provide opportunity to explore underlying concepts, technologies, and languages of contemporary video game productions. (4) To improve facility with 3D modeling software and game engine applications. (5) To gain an understanding of available game-related digital environments no only from a standpoint of a game-player but also from that of a game-maker. (7) To provide an opportunity to develop the ability to present ("pitch") a game idea project to others.

REFERENCES: (1) Bogost, Ian. *Persuasive Games: The Expressive Power of Videogames*. (Cambridge, MA: MIT Press, 2007). (2) Botermans, Jack. *The Book of Games: Strategy, Tactics & History*. (New York: Sterling, 2008). (3) Burnham, Van. *Supercade: A Visual History of the Videogame Age, 1971-1984*. (Cambridge, MA: MIT Press, 2003). (4) Hofer, Margaret K. *The Games We Played: The Golden Age of Board and Table Games*. (New York: Princeton Architectural Press, 2003). (5) Newman, James A. *100 Videogames*. (London: BFI, 2007). (6) Nielsen, Simon Egenfeldt with Jonas Heide Smith and Susana Pajares Tosca. *Understanding Videogames: The Essential Introduction*. (New York: Rutledge/Taylor & Francis Group, 2008). (7) Taylor, T.L. *Play Between Worlds: Exploring Online Game Culture*. (Cambridge, MA: MIT Press, 2006). (8) Thompson, Jim. *Game Design Course: Principles, Practice, and Techniques – the Ultimate Guide for the Aspiring Game Designer*. (Hoboken, NJ: Wiley, 2007). (9) Reas, Casey. *Processing: A Programming Handbook for Visual Designers and Artists*. (Cambridge, MA: MIT Press, 2007). (10) Watkins, Adam. *Creating Games with Unity and Maya: How to Develop Fun and Marketable 3D Games*. (New York: Focal Press/Taylor & Francis Group, 2011).

RESOURCES:
Students have access to *Pluralsight* tutorials about software applications from the lab. Students have 24/7 access to the Animation Lab that contains Lenovo P710 dual Xeon workstations with NVIDIA Quadro P5000 cards, 256GB RAM and Windows 10 Professional. Software applications available include Maya, 3DS Max, Mudbox, Unity, and Unreal.