

# Game Design\* Course Schedule

## **Introduction to Digital Technology (IDT) – 2 semesters.**

In this course, high school students can acquire a fundamental understanding of the operation of computers and computer networks and create useful programs implementing simple algorithms. By exploring and developing Web pages that include images, sound, and text, they can acquire a working understanding of the Internet, common formats for data transmission, and some insights into the design of the human-computer interface. This course is the prerequisite for advanced courses in Web & Digital Design, Programming and Game Design Pathways.

## **Computer Science Principles – 2 semesters.**

Prerequisite: Introduction to Digital Technologies

What is computer science? Engage your creativity, demonstrate and build your problem solving ability all while connecting the relevance of computer science to the society! Computer Science (CS) Principles is an intellectually rich and engaging course that is focused on building a solid understanding and foundation in computer science. This course emphasizes the content, practices, thinking and skills central to the discipline of computer science. Through both its content and pedagogy, this course aims to appeal to a broad audience. The focus of this course will fall into these computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating.

## **Game Design: Animation & Simulation – 2 semesters.**

Prerequisites: Introduction to Digital Technologies and Computer Science Principles

Students completing this course will gain an understanding of the fundamental principles used at every stage of the game creation process. First game genres and modes of play are explored in terms of the psychology of incentives, motivation to play, and social networking. Next, virtual characters and non-player characters are reviewed from concept drawing to 2D and 3D art, rigging and animation. Next, level design, storytelling and animation are added to develop a virtual world around the characters. These same techniques are at work in training simulators systems, virtual shopping experiences and augmented reality.