

Updated 3/7/22

Technology Class Descriptions, 2022-2023

Computer Literacy

Teacher: Will Hahn

Credit: 1

Meets: Full year, once weekly (see grid)

Text: None required

Required materials: Regular access to a personal computer. Access to the internet at home.

Homework time expectation: 1 hour weekly (varies with each unit)

Teaching Format: Lecture and demonstration (sometimes taking notes on the teacher's presentation). Weekly homework is the heart of the grade, and each quarter there will be one project-style grade. Polite participation in class is expected.

Description: Computers are a bit like automobiles: their impact is enormous, almost everyone will learn to use them, but hardly anybody understands them well enough to repair one if it gets broken! We will focus merely on how to "drive" the PC, with no need for advanced understanding of programming or code.

Quarterly units will cover:

Q1: Word processing utility, safe internet, and search engine use*

Q2: Presentation-style utility and a personal presentation

Q3: Spreadsheet-style utility and the use of graphs and figures

Q4: A combined-media project with the class in teams

*Internet Use and Safe Searching will be an emphasis throughout the year.

Students finishing this course will be comfortable with how to express their thoughts in papers, projects and other coursework in the future.

Computer Programming

Teacher: Jacob Rainbow

Credit: 1

Meets: Full year, once weekly (see grid)

Prerequisite: Pre-Algebra or currently taking Algebra I

Required materials: Laptop computer that can be brought to class and is running MAC, Windows or Linux

Homework time expectation: 1-3 hours weekly

Description: Are you curious about how to program a computer? Do you like playing with graphics and animation? Would you like to create your own game? This course offers you the opportunity to learn computer programming by creating interactive graphics. Using the Processing language (a subset of Java), you will learn how to create images, animate them, and interact with them. Using these skills, you will then design and create your own animated, interactive game. Along the way, you will be introduced to five big ideas in computer programming: variables, objects, functions, conditional logic, and iteration, and you'll understand what these mean by the end of the course! This course is a very user-friendly, fun introduction to computer programming. With this course, anyone can learn to program regardless of whether you're an artsy, visual-type person or a science-oriented, analytical person. This

Updated 3/7/22

course is geared for the beginner. All you need to know is how to turn on your computer, save and retrieve files, and access the internet. It will also allow open-ended freedom for students who want to dive deeper! It provides a strong foundation for any future computer programming class you may take and for any programming you may want to do on your own. Please email any questions to Jacob Rainbow: Jacob_Rainbow@yahoo.com.

Video Game Development

Teacher: Jacob Rainbow

Credit: 1

Meets: Full year, once weekly (see grid)

Prerequisite: Pre-Algebra or currently taking Algebra I

Required materials: Laptop computer capable of running Unity*

Homework time expectation: 1-3 hours weekly

Description: This course will cover the basics of game development using Unity, a free-to-use game development engine. Students will learn how to navigate the Unity interface, create characters and environments, and learn how to bring their creation to life using simple code. With this knowledge, students will be able to create their own basic game with assistance and guidance from the teacher. More advanced students will be given the freedom to expand on their projects as they choose. Students are required to have and to bring their own laptop computer to class (laptop must be capable of running Unity). Please email any questions to Jacob Rainbow: Jacob_Rainbow@yahoo.com.

*For Unity minimum system requirements:

<https://docs.unity3d.com/Manual/system-requirements.html>