

Oak Ridge High School

Magnet Program Course Catalogue

Digital Media Design & Gaming Magnet

Digital Media Design Track:

Introduction to Information Technology (8207310)

Credit: 1.0

Prerequisites: None; Grades: 9 – 12

This course is designed to provide an introduction to information technology concepts and careers as well as the impact information technology has on the world, people, and industry and basic web design concepts. The content includes information technology career research; operating systems and software applications; electronic communications including e-mail and Internet services.

- Meets the Fine Art Credit.
- Opportunity to receive up to 3 College Credits with Valencia College (which are mandatory College Credits with any Florida PUBLIC University/Colleges).
- Opportunity to receive Industry Certification in CIW.

Digital Design I (8209510)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Information Technology; Grades: 9 – 12

This course is designed to develop basic entry-level skills required for careers in the digital publishing industry. The content includes computer skills; digital publishing concepts and operations; layout, design, and measurement activities; decision-making activities; and digital imaging.

- Meets the Fine Art Credit.
- Opportunity to receive Industry Certification in Adobe.

Digital Design II Honors (8209520)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Information Technology **&** Digital Design I;
Grades: 10 – 12

This course is designed to develop basic entry-level skills required for careers in the digital publishing industry. The content includes computer skills; digital publishing concepts and operations; layout, design, and measurement activities; decision-making activities; and digital imaging.

- Meets the Fine Art Credit.
- Opportunity to receive up to 3 College Credits with Valencia College.
- Opportunity to receive Industry Certification in Adobe.

Digital Design III Honors (8209530)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Information Technology, Digital Design I & Digital Design II; Grades: 11 – 12

This course continues the development of industry-standard skills required for careers in the digital publishing industry. The content includes the use of a variety of software and equipment to perform digital publishing and digital imaging activities.

- Meets the Fine Art Credit.
- Opportunity to receive Industry Certification in Adobe.

Digital Design IV Honors (8209540)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Information Technology, Digital Design I, Digital Design II & Digital Design III; Grades: 12

This course is designed to develop advanced industry-standard skills required for careers in the digital publishing industry. The content includes the use of a variety of software and equipment, including digital video cameras and video/audio editing software.

- Meets the Fine Art Credit.
- Opportunity to receive Industry Certification in Adobe.

Digital Media Design & Gaming Magnet

Gaming Track:

Introduction to Information Technology (8207310)

Credit: 1.0

Prerequisites: None; Grades: 9 – 12

This course is designed to provide an introduction to information technology concepts and careers as well as the impact information technology has on the world, people, and industry and basic web design concepts. The content includes information technology career research; operating systems and software applications; electronic communications including e-mail and Internet services.

- Meets the Fine Art Credit.
- Opportunity to receive up to 3 College Credits with Valencia College (which are mandatory College Credits with any Florida PUBLIC University/Colleges).
- Opportunity to receive Industry Certification in CIW.

Game & Simulation Design (8208120)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Information Technology; Grades: 9 – 12

The course covers fundamental principles of designing a game or a simulation application, in a particular Human Computer Interface (HCI) principles, rules and strategies of play, conditional branching, design and development constraints, use of sound and animation, design tools, and implementation issues. The content includes market research, product design documentation, storyboarding, proposal development, and presentation of a project report. Emphasis is placed on the techniques needed to develop well-documented, structured game or simulation programs. Extensive use is made of evaluating and analyzing existing games or simulations.

Hospitality & Tourism Magnet • NAF Academy of Hospitality & Tourism

Introduction to Hospitality (8850110)

Credit: 1.0

Prerequisites: None; Grades: 9 – 12

The purpose of this course is to provide students with experiences and skills necessary for entry and development of a career in the hospitality industry.

- Opportunity to receive Industry Certification in Serv Safe.
- There is an application process to be accepted into this program.

Lodging Principles (8830320)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Hospitality; Grades: 10 – 12

The purpose of this course is to provide students with the competencies required for employment at the career specialist level in a variety of hospitality related industries.

Lodging Applications (8830330)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Hospitality **&** Lodging Principles; Grades: 11 – 12

The purpose of this course is to provide students with the skills and knowledge required for supervisory level and mid-management level employment in a wide variety of hospitality related industries.

Hospitality & Tourism OJT (8800420)

Credit: 1.0

Prerequisites: 'C' or better in Introduction to Hospitality, Lodging Principles **&** Lodging Applications;
Grades: 12

The purpose of this course is to provide students with the skills and knowledge required for supervisory level and mid-management level employment in a wide variety of hospitality related industries.

Aviation and Aerospace Engineering Magnet

Aerospace Technology I (8600580)

Credit: 1.0

Prerequisites: None; Grades: 9 – 10

This course provides students with an introduction to the knowledge, human relations, and technological skills found today in Aerospace Technologies.

- Recommendation: should be taken concurrently with Introduction to Engineering Design.

Aerospace Technology II (8600680)

Credit: 1.0

Prerequisites: 'C' or better in Aerospace Technology I; Grades: 10 – 12

This course provides students with an introduction to the knowledge, human relations, and technological skills found today in Aerospace Technologies.

Aerospace Technology III (8600780)

Credit: 1.0

Prerequisites: 'C' of Aerospace Technology I & Aerospace Technology II; Grades: 11 – 12

This program provides students with an advanced understanding of the knowledge, human relations, and technological skills found today in Aerospace Technologies.

Project Lead the Way

Introduction to Engineering Design Honors (8600550)

Credit: 1.0

Prerequisites: None; Grades: 9 – 12

This course exposes students to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. Students will employ engineering and scientific concepts in the solution of engineering design problems. In addition, they will learn to use 3D solid modeling design software to design solutions to problems. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions, document the process, and communicate the results.

- Recommendation: should be taken concurrently with Aerospace Tech I.
- Opportunity to receive Industry Certification in Autodesk Certified User.
- Opportunity to receive up to 3 College Credits with Valencia College.

Principles of Engineering Honors (8600520)

Credit: 1.0

Prerequisites: 'C' of better in Introduction to Engineering Design; Grades: 10 – 12

This course helps students understand the field of engineering/engineering technology and prepares them for postsecondary engineering programs by developing a more in-depth mastery of the required knowledge and skills in mathematics, science, and technology. Through problem-based learning strategies, students study key engineering topics, including mechanisms, energy sources, energy applications, machine control, fluid power, statics, material properties, material testing, statistics, and kinematics. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change.

- Opportunity to receive up to 3 College Credits with Valencia College.

Computer Integrated Manufacturing (8600560)

Credit: 1.0

Prerequisites: 'C' of better in Introduction to Engineering Design & Principles of Engineering;
Grades: 11 – 12

This course applies principles of robotics and automation. The course builds on computer solid modeling skills developed in Introduction to Engineering Design. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts or robotics used in automated manufacturing, and design analysis are included.

- Opportunity to receive up to 3 College Credits with Valencia College.