**9th Grade Elective Option Course Descriptions**

**DIGITAL MEDIA 0.5 credit** (one semester)

Grade Appropriate: **9-12**

This course will introduce taking digital images and understanding lighting, background and subject. Students will use PhotoBooth (effects), GarageBand (creating music), iPhoto (organizing/editing images), Adobe PhotoShop Elements (color/editing), iMovie (creating slideshows and editing movies), and iDVD. Students will be required to produce and publish several group or individual projects for the school or community. By the conclusion of the semester, students will have created a DVD of all the work from the course. ***This course meets the computer technology graduation requirement.***

**DESKTOP PUBLISHING 0.5 credit** (one semester)

Grade Appropriate: **9-12**

This course provides development of basic keyboarding skills. It proceeds from basic alphabetic keyboarding through numeric and symbolic keyboarding. Type-2-Learn Computer program is used along with the College Keyboarding and Document program. These programs provide students the opportunity to learn keys, write business letters, address envelopes, type office memo and reports, create tables and develop resume’s, letters of application, and follow-up letters. Students will also learn proper keyboarding techniques and build basic speed and accuracy.

This course will also focus on pieces of Office Suite and GoogleDocs, and how they can be used together. Students will work with word, excel, access, publisher, powerpoint, docs, YouTube, slides and sheets. Participants will learn basic and advanced functions of all programs in an effort to help them prepare for the business world as well as practical college application. ***This course meets the computer technology graduation requirement.***

**ALTERNATIVE ENERGY 0.5** credit (one semester)

Grade Appropriate: **9-12**

Modern human civilization depends upon energy to drive our machines, give us light, and regulate our thermal environment. Over the past century, the energy has largely come from fossil fuels like coal, oil, and natural gas. Many scientists are concerned that the byproducts of fossil fuel combustion are leading to potentially catastrophic climatic change. To address that problem, and overcome dwindling energy supplies, many are advocating the development and implementation of alternative renewable energy like wind, solar, geothermal, biomass, and hydrogen. But are those alternatives more sustainable and environmentally friendly? This course will explore the growing scientific evidence relating to the costs and benefits of alternative energy, and will help you to distinguish between reality, hype, and fanaticism. ***This course meets the computer technology graduation requirement.***

**CREATIVE TECHNOLOGY 0.5** credit (one semester)

Grade Appropriate: **9-12**

The look, feel and use of objects communicate their value to us. This course applies cognitive science and technology to the industrial design process. The course will introduce prototyping techniques and approaches for objective evaluation as part of the design process. Students will practice evaluating products with mechanical and electronic aspects. The evaluation process will then be applied to creating functioning product prototypes. This is a project-oriented course that will draw on engineering, aesthetic, and creative skills. The course is geared towards students interested in creating physical products. Students will present readings, learn prototyping skills, create a product prototype, try to improve upon existing designs and complete a publication style paper. ***This course meets the computer technology graduation requirement.***

**3-D DESIGN & MODELING 0.5** credit (one semester)

Grade Appropriate: **9-12**

As students enter the wonderful world of Architectural Drafting, they will be exploring subunits of Construction Systems, Interior Design, and Exterior Design that will lead them into understanding the modern marvels of contemporary architectural design.

The “contract learning” approach is a mix between independent study, an online course, and a modular lab program. The idea behind this is to move into a more up-to-date and **student oriented program**. Students will have the ability to focus on the topics that **they** are most interested in. Each person taking this course could be studying totally different material.

Students will be introduced to up-to-date architectural drafting programs, 3D modeling programs, and also building their scale model designs. If you have an interest construction, becoming an architect, interior designing, or landscape design; then this class is for you! ***This course meets the computer technology graduation requirement.***

**SCULPTURE 0.5 credit** (one semester)

The objective of Sculpture is to build a strong understanding of visual art focused on the techniques and processes of three-dimension art (in the round and relief). Additive, subtractive, assemblage, and casting sculpture projects will be used to build students’ knowledge of sculpture processes. Students will complete sculptural projects that show how the elements and principles of art can create a good design for a piece of art. They will also be exposed to art history and appreciation through videos, discussion, written assignments, including reflective writing, demonstrations, and critique sessions. ***This course meets the computer technology graduation requirement.***

**APPLIED ROBOTICS 0.5 credit** (one semester)

This curriculum offers experiences for both beginner and advanced learners and is intended to give students a scalable exploration of computer programming languages, robotics, engineering and related concepts. The primary goals of this course are to understand and integrate the components that produce a functioning robot. Students will develop logic skills, gain proficiency in appropriate programming languages and grow a familiarity with robot design, building and programming. Students in this course will develop an intimate understanding of the Engineering Design Process and the mechanical, electrical, and software components of robotics. This course is a hands-on, project-based application of the engineering process. Students will design, build, test and program robots, utilizing the programming languages and logic skills covered in the course curriculum.

This course is designed to be an intermediate/advanced level course and students would benefit from having a basic knowledge or experience with logic and computer programming. Students will be members of the Lake Placid FIRST FRC robotics team (Team #7030) and will compete in high level (national/international) high school robotics competitions. Students will design and build industrial robots from scratch – mastering the fundamental concepts in the process. Mechanical assembly, drive train design, electrical wiring, Java programming, mechanical engineering and robot command and control are skills students will develop in this process. This course will employ advanced 3D printing tools and develop skills for 3D model and part design. ***This course meets the computer technology graduation requirement.***

**Creative Writing 0.5 credit** (one semester)

Grades Appropriate: **9-12**

This is a semester elective writing course for highly motivated students who wish to explore and pursue different forms of creative writing. Students will develop skills in writing creative fiction, essays, and poetry. ***This course meets the English elective graduation requirement.***

**Acting and Public Speaking 0.5 credit** (one semester)

Today more and more public speaking is taking place in the college classroom and in the workplace. Students and workers are expected to express themselves effectively in front of others. The interesting dilemma students face is that with increased technology use, fewer situations arise when students socially and professionally interact with peers and adults. This course will be an entertainingly difficult course that will push students out of their comfort zones and into effective public speaking and acting.

The class seeks to combine acting and public speaking to help students become more effective communicators. The first ten weeks will focus primarily on acting. Multiple theories of acting will be discussed and practiced. Students will become more comfortable performing the written word, either their own thoughts or others. The second ten weeks will apply this acting training to other forms of public speaking. Students will perform famous speeches as well as their own material. Students should seek to enhance their public speaking by incorporating practices learned while acting. ***This course meets the English elective graduation requirement.***

**Science olympiad 0.5 credit** (one semester)

This course provides an opportunity for students in grades 9-12 to learn the science, engineering, and math necessary to compete in the Science Olympiad national competition. You must sign up for this course if you plan on competing in the Science Olympiad tournaments. Come and build a robot, construct a tower, learn about quasars, or hone your microscopy skills! We are very excited for the upcoming year! Be a part of the team!