

# TECHNOLOGY

## DDP - DESIGN AND DRAWING FOR PRODUCTION -

This course may be used in place of the Art/Music requirement that all students are required to take. An excellent backbone course for any student studying engineering or architecture and a must for future Tech Ed courses, or any technical areas. Students will be exposed to sketching, the tools and materials used in drawing: lettering, and dimensioning. Students will practice doing view or working drawings, pictorial drawings and some sectioning and auxiliary views. During the second half of the year you will work in-groups and design from scratch a project, produce all necessary drawings, and then build the project to those specifications. The last part of the year students will be introduced to computer aided drafting (CAD). Here they will learn basic commands and get the feel for drawing without a pencil.

**1 CREDIT**



## CAD - COMPUTER AIDED DESIGN (Dual credit with TC3 available)

This full year course will concentrate on concepts learned in DDP and apply the concepts on the computer. The students will learn to draw gears, gaskets, molds, and a variety of other mechanical devices on the computer. This course uses the TC3 syllabus and brings a college level course right into the High School. AutoCAD 2002 is the standard today in industry and having knowledge of AutoCAD will look great on a resume. This course is for students interested in Engineering, Drawing, Designing, Interior Decorating, Architecture, or any students Interested in any field that involves construction.

Prerequisite: Successful completion of DDP *OR* permission from the instructor.

**Articulation agreement with Delhi University (3-6 Credits after successful completion of one full year)**

**1 CREDIT**

## ARCHITECTURAL DRAWING

Are you interested in building houses and making big money? In architectural class you will design, draw (by hand and/or on the computer), and build a scale model of "your" dream house or summer home. We will cover all the major architectural concepts: as well as teaching modeling and computer drafting. This course will be tailored to your interests, by concentrating on the building trade, or the interior design aspect of architecture. Taking the DDP class prior to enrolling in this course will be helpful. Having CAD experience will be a major help.

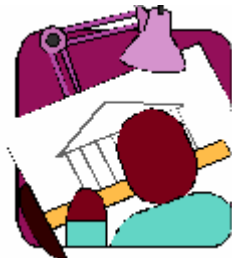
**1 CREDIT**

## PRINCIPLES OF ENGINEERING

**This course can be used for your third year of Math or Science requirement.** This is a survey class that will cover most of the major engineering disciplines. You will be challenged with several different problem-solving situations that will demonstrate the various engineering fields. Examples of projects used to introduce these concepts are hovercrafts, Ariel photography, survival structures, and machine automation.

Prerequisite: You must have successfully passed two years of regents math and science before enrolling in this class.

**1 CREDIT**



## THE WORLD OF TECHNOLOGY

This course can be used for your third year of Math or Science requirement. The World of Technology provides students with opportunities to become engaged in critical thinking as they design, develop, and build solutions to real world problems. Use computers, tools and machines to test out materials and processes. A great place to experiment.

**1 CREDIT**

## PHOTOGRAPHY I - BLACK AND WHITE (Dual credit with BCC pending)

Tired of taking lousy pictures. Are your pictures too dark or blurry? Do your friends' pictures have red beady eyes because of how you used your flash? In this class we use 35mm SLR cameras and black and white film. You process, print and mount your own 8 X 10 prints. All the different concepts of camera operation and picture taking are discussed from depth of field to flash units to night shots. You shoot lots of pictures and develop a great portfolio to use for future experiences.

**1/2 CREDIT**

## PHOTOGRAPHY II - (Dual Credit with BCC pending)

This class is a continuation of Black and White Students will continue to master new technical skills, hone craftsmanship, and explore the creative and expressive uses of photography. In the last 10 weeks we go to the computer with photography. Using Photoshop, a scanner and digital cameras we work with our B & W pictures to correct mistakes, add things or totally change the photo. The results are cool on glossy print paper. Wow, will there be such a thing as a darkroom in the future?

**1/2 CREDIT**



## **YEARBOOK**

Designing a hardcover yearbook with written and pictorial memories of the year. This class must raise all the money necessary to publish and distribute the book. The class involves book and ad sales, layout work on computer, interviewing, and photography. Deadlines loom over you all the time. Only dedicated hard workers need apply. Enrollment by teacher permission only.

**1/2 CREDIT**

## **COMPUTER GRAPHICS**

Desktop publishing is a very big industry. This course will use PageMaker, Microsoft Publisher, and PhotoShop to show students how to layout documents for publishing whether small or large. Students will learn how to place words and pictures to produce such things as business cards to newsletters. Most desktop systems come with some form of publishing included in their software. Learn how you can use it to improve your work. This class is the second half of yearbook class so are expected to take yearbook. Enrollment is with teacher permission.

**1/2 CREDIT**

## **PRODUCT DESIGN AND PRODUCTION (2003-2004)**

Do you like designing and building your own projects? Do you have people asking you to make things for them? Then this class is for you. Not only will you design and build your own products, but you will also interview, design, draw, and build products that will be used by other people.

**1 CREDIT**

## TRANSPORTATION SYSTEMS (2003 - 2004)

Like to race, try your skill at CO2 cars. Build them and race them in the hall. The 1<sup>st</sup> place winner gets a trophy. This course explores the transportation industry with three sub-modules: land, marine, and aerospace transportation. In this class the student will build a cool custom CO2 car, experience flight with controllable airplanes and build the coolest model rocket that Newark Valley has ever seen. All this and more in this transportation class.

**1/2 CREDIT**

## LAND TRANSPORTATION (2003 - 2004)

Rebuild your Briggs, Tecumseh or Kohler engine. We study lots of different engines, from model airplanes to big diesels. The best part is that students bring in used engines that need repair and working in teams they disassemble, clean, check tolerances, repair and reassemble the engine to a running condition. We may work on car engines if time permits.

**1/2 CREDIT**



## ELECTRICITY/ELECTRONICS (2003 - 2004)

Learn some electrician skills in this class. From the power plant to the outlet on the wall we study it. We learn the basic types of circuits found in the house and wire up a wall feeding the circuits at different points. We test with the real stuff. Stand back in case it blows a breaker. DC electricity is included in this class with discussion of series and parallel circuits. Learn how to read and use a digital voltmeter, to repair taillights on cars or a short on your dirt bike.

**1/2 CREDIT**

## **COMMUNICATION ELECTRONICS (2003 - 2004)**

This course includes the study of communication equipment. We look at TV and radio operation. Study surface mount electronics and build some basic electronic kits learning basic concepts at the same time. Use a digital voltmeter to help make sure your electronic kit works.

**1/2 CREDIT**



## **COMMUNICATION SYSTEMS (2004 - 2005)**

Are you a future film star? Do you like making video and audio creations? We will teach you to make a short film, TV advertisements, Radio broadcasts, and printing techniques. Then at the end of the year you will make a short film and enter it into the Newark Valley Cannes Film Festival.

**1/2 CREDIT**

## **GRAPHIC COMMUNICATIONS (2004 - 2005)**

This class is taught the second half of the year, behind the Communication Systems class. During this time you will develop and produce the graphic (printed) advertisement campaign for the short film that you made during the Communication Systems class.

**1/2 CREDIT**

## MATERIALS PROCESSING 2004 - 2005

Like to build stuff, then take this class. Learn about different materials and ways to process them by building your favorite projects. Students are required to work with wood, metals (welding, forging and sheet metal) and plastics (polyester casting, vacuum forming and/or acrylic sheet).

Learn just about every tool and machine the shop has. The perfect class to take before Production systems.

**1/2 CREDIT**

## PRODUCTION SYSTEMS 2004 - 2005

Got that entrepreneur spirit to design, make a sell something. This is the class for you. Ten weeks are spent designing, producing and marketing a product. Can we make any money or will we go broke. This is a great class to learn about the various aspects of Manufacturing where students start up a company. **Construction**, which is the second 10 weeks, gives each student the opportunity to try their hand at framing up a building and all that is involved with this type of work. Lots of hands-on work in Production systems.

**1/2 CREDIT**



## CONSTRUCTION SYSTEMS 2004-2005

This course is the practical application of the building industry. We will instruct you on the building of homes and buildings from the foundation to the roof. You will make a scale model of a building using all of the proper techniques that would be used to make a full size structure. Later on you will have the opportunity to build an actual building out of 2x4's and plywood. The emphasis of our instruction will be to train contractors, not building crews.

**1 CREDIT**