

# Industrial Arts

## IT300A/B Graphic Communication 1

**Grades 9-12**

**Trimesters: 2**

**Prerequisites: None (Meets Applied Art Requirement)**

**Credits: 1**

**Repeat for Credit: No**

The broad concepts of graphic reproduction are introduced with a major emphasis on offset printing, screen-printing, and photography. Units of instruction include: computer typesetting and design, composition, layout, design, line camera principles, press, and bindery work. Graphic Communications is a performance-based class in which students will have the opportunity to produce a number of individual projects.

## IT320A/B Graphic Communication 2

**Grades 10 -12**

**Trimesters: 2**

**Prerequisites: Passing grade in Graphic Communications 1 (Meets Applied Art Requirement)**

**Credits: 1**

**Repeat for Credit: Yes**

This production-oriented course gives students an opportunity to learn more advanced techniques in printing. This course is structured so that students will work cooperatively at various stations to learn new techniques and also have time to complete individual projects.

## IT400A/B CADD – Computer Aided Design and Drafting

**Grades: 9-12**

**Trimesters: 2**

**Prerequisites: None (Meets Applied Art Requirement)**

**Credits: 1**

**Repeat for Credit: No**

CADD introduces students to the use of computers to create technical drawings of objects. Projects are designed to develop the students' knowledge of industry standards. AutoCAD and Solid Edge are the software used. Early assignments begin with simple drawings and progress to increasingly complex designs. The CADD lab is updated with state-of-the-art projection media, a large-scale color plotter, and 24 new computers. *All* students are encouraged to take this class in order to develop graphic communication and perception abilities. Any students planning a career in CADD, construction, manufacturing, architecture, engineering, or related fields, are strongly encouraged to take CADD.

## IT100 Video Communication 1

**Grades: 9-12**

**Trimesters: 1**

**Prerequisites: None (Meets Applied Art Requirement)**

**Credits: .5**

**Repeat for Credit: No**

Students will produce a variety of video projects using the knowledge and skills developed through instruction, observation, and experience. The importance of planning a video project is emphasized. Students brainstorm project ideas, create storyboards, shoot, and edit. Digital video cameras and computer software are used to capture and produce videos that have music, narration, transitions, special effects, graphics, and titles. This class is recommended for any student that enjoys making videos. VC1 is a "must-take" class for those students planning a career in video production, broadcasting, communication, or related fields.

## IT120 Video Communications 2

**Grades 9-12**

**Trimesters: 1**

**Prerequisites: A grade of C- or better in Video Communication 1**

**Credits: .5**

**Repeat for Credit: Yes**

Students will use in-depth methods to produce projects such as the school's daily announcements, short movies, and instructional videos for teachers, video tours of the school district, etc. Every student will get experience participating in roles of scriptwriter, director, producer, camera operator, editor, and others. Emphasis is placed on efficient production methods and meeting deadlines.

### **IT500A/B/C Yearbook Design and Creation**

**Grades:** 11-12

**Trimesters:** 3

**Prerequisites:** A 'B' or better in ELA 1 or 2 & Graphic Com. is recommended

**Credits:** 1.5

**Repeat for Credit:** Yes, with instructor's permission

The Chippewa Hills High School yearbook is created in this class. Students learn graphic design and layout principles and apply them to the production of yearbook pages. Digital photography is taught. Web-based software is used extensively. The class works as a team to plan, design, create, market, finance, and distribute the yearbook. To be successful in Yearbook, students must have strong ethics, work habits, and work under the pressure of meeting deadlines. Above average writing skills are also important. Strongly recommended for students pursuing a career in journalism, graphic communications, photography, or other related areas.

### **IT200A/B Wood Technology**

**Grades:** 9-12

**Trimesters:** 2

**Prerequisites:** None (Meets Applied Art Requirement)

**Credits:** 1

**Repeat for Credit:** No

Wood technology is a classroom and laboratory course in woodworking. Introductory skills and safety procedures will be emphasized and learned while building 3 introductory projects. Students are introduced to the basic operation of woodworking machinery, wood joints, furniture building, lathe turning and wood bending.

### **IT220A/B Advanced Wood Technology**

**Grades:** 10-12

**Trimesters:** 2

**Prerequisites:** Wood Technology (Meets Applied Art Requirement)

**Credits:** 1

**Repeat for Credit:** Yes, with instructor's permission

Students will build on skills learned in Wood Technology. Emphasis is placed on the construction of furniture with drawers and doors. Students are also asked to design and build a project of their choice using custom plans and in depth construction techniques.

### **IT280 Wood for Sports**

**Grades:** 10-12

**Trimesters:** 1

**Prerequisites:** Wood Technology (Meets Applied Art Requirement)

**Credits:** .5

**Repeat for Credit:** No

Students learn techniques for building wooden sports equipment. Wood bending and lamination are utilized to build projects such as Snowshoes, Canoes, Fishnets, Toboggans, Baseball bats and other sporting goods.

### **IT150A/B Welding Technology**

**Grades:** 9-12

**Trimesters:** 2

**Prerequisites:** None (Meets Applied Art Requirement)

**Credits:** 1

**Repeat for Credit:** Yes

This course is designed as an introduction to metal welding and cutting processes. Students are introduced to Oxy-fuel cutting and welding, Shielded metal arc welding, Gas metal arc welding, Plasma arc cutting and project fabrication. Safe use of tools, cooperation and teamwork are emphasized. Students complete a variety of test welds and then design and build a project of their choice. Students completing this course are ready to enroll in the MOCC welding program

### **IT160 Small Engines 1 – Principles of Operation**

**Grades:** 9-12

**Trimesters:** 1

**Prerequisites:** None (Meets Applied Art Requirement)

**Credits:** .5

**Repeat for Credit:** Yes

This course will introduce students to the theory and operating principles of 2 and 4 cycle engines. Carburetion, Ignition, Cooling and Lubrication systems will be studied along with basic tool use and general shop safety. The students are required to rebuild a 5hp Briggs and Stratton 4 cycle engine and a 2-cycle Stihl weed whip engine. Students completing this course are ready to enroll in the MOCC power mechanics program or Small Engines 2.

## **IT402 Small Engines 2 – Troubleshooting, Repair and Maintenance**

**Grades: 9-12**

**Trimesters: 1**

**Prerequisites: Small Engines 1 (Meets Applied Art Requirement)**

**Credits: .5**

**Repeat for Credit: No**

This course will build on the knowledge base gained in Small Engines 1 and apply it to repair and troubleshooting techniques. Students learn how to perform basic repairs and maintenance tasks on various small gas engine powered equipment from Snow blowers to Garden tillers. Teamwork and cooperative work skills are emphasized. Students completing this course are ready to enter the work force with entry-level skills or enroll in a program of higher learning in the field of power mechanics.