

Project Lead The Way Courses

DDP- Design and Drawing for Production

Code: T750 Full Year 1 credit

Recommendation: 70% in Math 1H or Accelerated Earth Science 8.

Topics include:

- Autodesk Inventor/3D Computer Modeling
- Basic technical drawing
- Problem Solving
- Engineering Design Process

DE- Digital Electronics

Code: T771 Full Year 1 credit

Recommendation: Completion of two Regents Math and Science courses, and DDP.

Topics include:

- Introduction to digital circuits
- Application of digital logic
- How digital devices are used to control automated equipment
- Robotics
- Computer simulation of digital circuits
- Hands on Projects

POE- Principles of Engineering

Code: T773 Full Year 1 credit

Recommendation: Completion of one Regents Math and Science course, and DDP.

Topics include:

- Engineering systems and manufacturing processes
- Exploration of careers in Engineering
- Hands-On activities involving models and robotics

CEA- Civil Engineering & Architecture

Code: T774 Full Year 1 credit

Recommendation: Completion of one Regents Math and Science course, and DDP.

Topics include:

- Structural Engineering
- Satellite and ground surveying
- Soil & materials testing
- Design 2D & 3D residential and commercial computer models

EDD- Engineering Design & Development

Code: T775 Full Year 1 credit

Prerequisite: Two Regents Math & Science courses, DDP, and two other PLTW class.

Topics include:

- Research design and construct a solution to an open-ended engineering problem
- Students work with a community mentor
- Strong emphasis is placed on the design process
- Students present final solutions to a panel of judges and engineers

Facts and Questions

Why should I take a Technology class?

- Our classes utilize latest leading cutting edge technologies
- Receive hands-on training using real-life applications
- Apply Math and Science skills to solve problems
- Explore career paths to lead you to the right college or education and work fields
- Prepares you for the future!

What is Project Lead the Way (PLTW)?

-PLTW is a national non-profit organization established to help schools give students the knowledge they need to excel in high-tech fields. Studies of PLTW's curriculum have proven that PLTW students become the kind of prepared, competent, high-tech employees U.S. Industry needs to stay competitive in the global market. For more information visit: <http://www.pltw.org>

Do PLTW classes offer college credit?

-Yes. If students receive an 85 or higher, they can receive college credit from Rochester Institute of Technology. Credit may be transferred to other institutions (depending on program).

Will a Technology class meet the Regents Art/Music requirement?

-Yes. You can take Communication Systems/ Studio-In-Art (I100) or PLTW Design & Drawing for Production (T750) and you will receive credit in Technology and fulfill your Regents Art/Music requirement.

Who can take Technology classes?

-All young men and women interested in design, problem solving, engineering, math, science, working with computers, and working on hands-on activities are encourage to enroll.

How can I learn more about the program?

- Talk with your guidance counselor
- Talk with a Technology Teacher
- Visit the Technology Department (Behind Auditorium)
- Visit us Online

John Jay High School



Technology Department

Course Program

2012 Route 52
Hopewell Junction, New York 12533
845.897.6700 x158

1/14/08

Systems Courses

Communication Systems/ Studio in Art

Code: I100 Full Year 1 credit

Recommendation: None

Topics include:

- Television camera operation
- Program planning
- Studio sound and lighting
- Analog audio and video recording/editing
- Satellite technology
- Digital video and sound production
- Computer Generated Imagery (CGI) special effects in video

Construction Systems

Code: T723 Half Year .5 credit

Recommendation: Materials Processing (wood)

Topics include:

- Systems in construction of superstructure, bridges, and roadways
- Foundations
- Enclosures
- Utilities
- Materials
- Tool and machine use
- Career exploration
- Planning and design
- Students will construct a mini-barn

Transportation Systems

Code: T720 Full Year 1 credit

Recommendation: None

Topics include:

- Activities involving land, aerospace, and marine transportation
- Small engine repair
- Computer Flight Simulators
- Preventive maintenance
- Simple car repairs
- NYS Boat Safety Certification
- Diagnostic systems and trouble shooting

Foundation Courses

Materials Processing - Wood

Code: T753 Half Year .5 credit

Recommendation: None

Topics include:

- How to work with wood as well as several other construction materials
- Learn to work with basic hand and machine tools
- Lab activities and projects geared toward student ability
- Wood identification and selection
- Lathe tool project
- Wood finishing

Materials Processing- Metal

Code: T759 Half Year .5 credit

Recommendation: None

Topics include:

- The many uses of metal
- Working with sheet metal
- Forging
- Foundry
- Welding
- Machine projects
- Other construction materials
- Working on sheet metal, wall plaques, welding and machine projects

Basic Electricity and Electronics

Code: T725 Half Year .5 credit

Recommendation: None

Topics include:

- Basic circuits, meters, electrical tools and equipment
- Direct and alternating current fundamentals
- Integrated circuits, sources of electricity and electric materials
- Individual and group projects and experiments

Technical Drawing

Code: T753 Half Year .5 credit

Recommendation: None

Topics include:

- Develop the power to visualize
- Train for accuracy
- Read and make working drawings
- Develop drafting and lettering skills
- Learn correct drawing room practice

Elective Courses

Computer Graphics

Code: T743 Half Year .5 credit

Recommendation: None

Topics include:

- Computer Animation
- Multimedia production
- Print technology
- Bitmap and vector image production
- Scanning technology
- Television and video imagery
- Screen printing

Web Page Design and Production

Code: T742 Half Year .5 credit

Prerequisite: Computer Graphics

Topics include:

- History and current trends in Web production
- Web programming, JavaScript, Action Script
- Web authoring
- Interactivity and animation
- Cascading Style Sheets (CSS)
- Image preparation
- Web management
- Video streaming

CAD- Computer Aided Design

Code: T745 Half Year .5 credit

Recommendation: Technical Drawing or DDP

- Applications of CAD systems
- Impact of CAD on industry and careers
- Technical design and layout

Advanced Woodworking

Code: T754 Half Year .5 credit

Recommendation: Materials Processing- Wood

Topics include:

- Furniture making
- Lab maintenance
- Complex joints
- Defining the biological and physical capabilities of wood
- Jigs and fixtures