

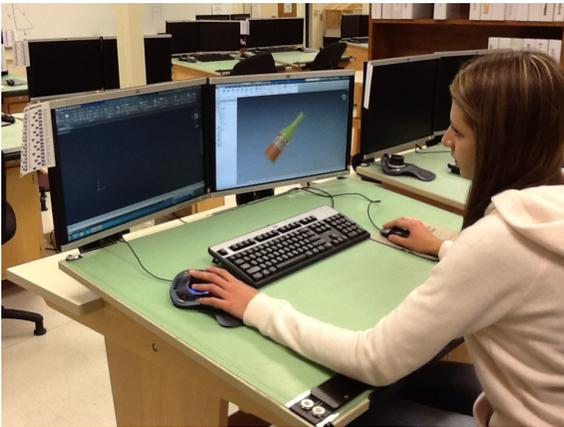
Engineering Drafting Technology

Lycoming Career & Technology Center
293 Cemetery Street
Hughesville, PA 17737-1020
570-584-2300
(fax) 570-584-2401
www.lycoctc.org

Overview:

The LycoCTC Engineering Drafting Technology Program introduces students to mechanical, architectural, civil, and computer-aided drafting (CAD) skills. Students have the opportunity to learn manual, as well as computer-aided drafting techniques for producing drawings and 3-D parts. Direct employment in the drafting and design field and/or advancement to a college/post-secondary education is a goal of this program. This program provides a broad foundation of drafting skills that are transferable to many careers. The Engineering Drafting Technology course is not limited to the activities listed here, but includes other competencies such as gaining work ethic skills and developing a professional portfolio. Students are given the opportunity to work hands-on with other LycoCTC programs to complete “live” projects in the area of architecture and product design.

During field trips and job placement opportunities, students observe firsthand the close interaction of the draftsman to the manufacturer, builder, and industry. By experiencing these activities, students see the transformation of an idea from a sketch to a finished product. In their senior year, students have an opportunity to accept a job position in industry, attend college to earn college credits, or earn college credits in the LycoCTC classroom.



Architectural Design

Students learn concepts needed to create architectural drawings used in residential construction. Students create a complete set of drawings for a garage and a house of their own design.



Mechanical Design:

Initially, students learn manual drafting techniques and eventually move onto advanced CAD programs to complete assignments and drawings. They become familiar with the basics of creating simple sketches and the techniques involved in creating finished drawings. Students become competent in creating many different types of drawings. They also learn how to create dimensioned drawings, assembly drawings, and work with mechanical tools. They learn to plot drawings, and have the chance to create 3-D models and print them out with one of our 3-D prototype printers, which create parts they can actually hold. Students also learn to use a 3-D scanner, which enables them to reverse engineer objects.

Civil Drafting:

Students become familiar with the drawings required to design bridges, roads, buildings, and water systems. They learn surveying skills by using a total station and data collector. They also learn to download information gathered from the surveying equipment to the computer in order to create, plan, and plot drawings.



Mathematics:

This program utilizes many mathematical concepts. Mastery of measurement and a strong working knowledge of geometry are essential for the student to experience success in this program. Students in this program work with fractions, decimals, the metric system, and algebraic expressions.

Career Opportunities:

Middle school students planning a career in drafting can prepare for LycoCTC by taking courses in math, science, computer technology, computer graphics, and any drafting courses offered at their home school. Artistic ability is helpful in some specialized fields, as is knowledge of manufacturing and construction methods. In addition, prospective drafting students should possess excellent interpersonal skills since they will be working closely with other professionals. Related professions include:

- Architect
- Civil Engineer
- Cartographer
- Graphic Designer
- Landscape Architect
- Surveyor
- Mechanical Engineer
- Product Designer

Mission Statement:

The Lycoming Career & Technology Center, an alliance of cooperating school districts, delivers quality career and technical programs through business and education partnerships to ensure successful transition to the workforce and/or continuing education.

For more information on the Lycoming Career & Technology Center's Engineering Drafting Technology program, or to arrange a visit, please contact:

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For more information, visit our website:
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