

## Learning Topics:

Mathematics

Robotics

Computer-Aided Design

Computer Numerical  
Control

General Dimensioning and  
Tolerances

Mechanical Systems

Pneumatics

Hydraulics

Electrical

Measurement Tools

Machine Tools

Print Reading

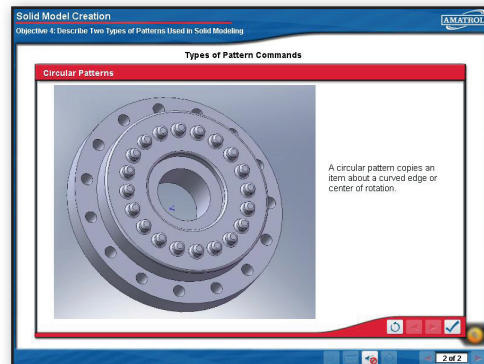
Principles of Materials

Surveying

Workplace Effectiveness

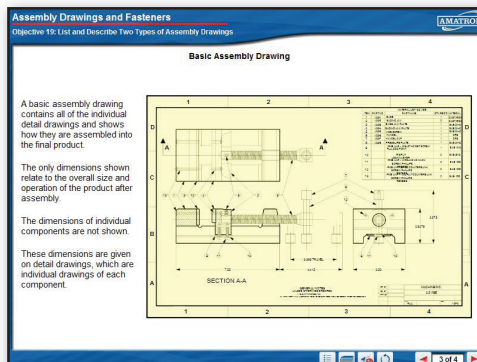
## Technology Design

Technology design helps companies make manufacturing processes more effective and efficient. Within ITC, students will study computer-aided design (CAD) through topics such as the function of solid modeling, sketch commands, drawing planes, multi-view drawings, 3D assembly, and standard mate and component manipulation. Students interested in this area can become CAD technicians in areas such as computer-aided engineering and computer-aided manufacturing.



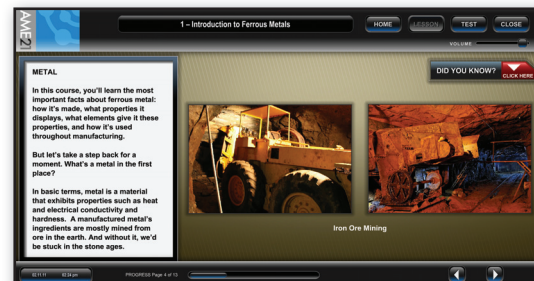
## Engineering

Engineering combines math, science, and ingenuity to create and design products and processes within fields such as chemical, civil, electrical, mechanical, and many more. ITC students study topics like types of structures, data acquisition, bending stress, bridge designs, technical drawings, and surveying. Students with a strong aptitude for math, problem solving, and inventiveness will fit well within this area.

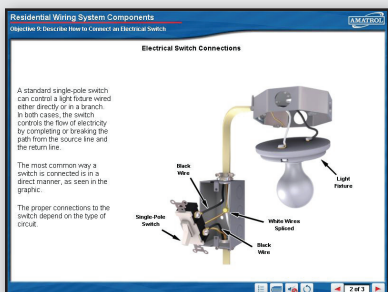
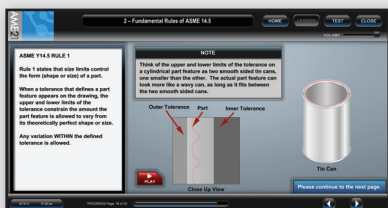
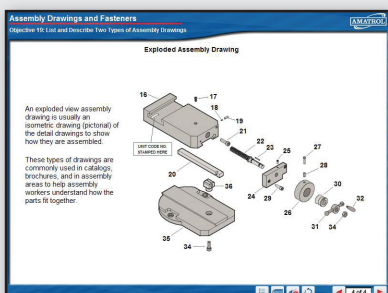
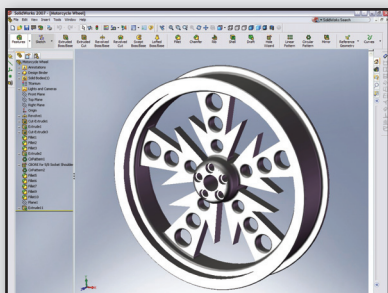


## Manufacturing

Manufacturing has long been a strong piece of the American economy. However, in recent decades, it has undergone a move toward technology and requires tech-savvy employees familiar with common automated factory machines and processes. Within ITC program courses, students study about Programmable Logic Controllers (PLCs); basic robotic operation, software programming, and application development; and the principles of materials, such as metals and plastics. Students interested in this area will gain a head start on manufacturing jobs looking for candidates with strong technical knowledge.



# ITC High School eLearning Program



All Amatrol eLearning programs for high school include core courses in mechanical, electrical, and industrial technology. These standard courses include: Basic Electricity, Pneumatics, and Hydraulics; Measurement; Mechanisms; Manufacturing Processes; Electrical Control; Print Reading; Mathematics; Trigonometry; Communication Skills; Conflict Resolution; and Working in Groups. Students will gain valuable knowledge from these courses that can be applied across all areas of our economy.

## Amatrol ITC High School eLearning Program Courses

Course Title	Est. Hours	Functional Software Req.	Course #
AC/DC Electrical	24	-	W-VTB227
Basic Hydraulics	20	-	W-VTB831
Basic Pneumatics	20	-	W-VTB780
CAD 1	8	SolidWorks	W-12273
CAD 2	6	SolidWorks	W-12274
CAM 1	8	Mastercam VX2	W-B723
CNC 1	6	VR Milling	W-B705
CNC 2	6	VR Milling	W-B706
Communication Skills	2	-	PD101
Conflict Resolution	2	-	PD102
Computer Control 2	8	Rockwell's RSLogix	W-B764
Desktop Publishing	4	-	W-WXB745
Electrical Fabrication 1	6	-	W-12204
Electrical Relay Control	12	-	W-VTB703
Electro-Fluid Power	16	-	W-B861
Electronic Sensors	4	-	W-B837
General Dimensioning and Tolerances	2	-	BP203
General Dimensioning and Tolerancing	2	-	BP204
Graphic Design	6	-	W-B747
Intermediate Hydraulics	6	-	W-B832
Intermediate Pneumatics	6	-	W-B835
Machine Tools 1	12	-	W-VTB701
Materials Technology 1	2	-	W-B782
Mathematics 1	2	-	MA101
Measurement Tools	12	-	W-VTB725
Mechanical Fabrication 1	8	-	W-19004
Mechanical Fabrication 2	8	-	W-12245
Mechanical Systems	12	-	W-VTB728
Mechanical Systems 2	10	-	W-B729
Plastics 1	6	-	W-B767
Principles of Materials - Ferrous Metals	2	-	ML201
Principles of Materials - Non-Ferrous Metals	2	-	ML202
Print Reading 1	8	-	W-12207
Quality Tools	2	-	QS305
Robotics 1	6	-	W-B761
Robotics 2	8	-	W-B762
Structural 1	6	Bridge Designer	W-11600
Surveying	8	-	W-B803
Thermal Science	8	-	W-11604
Trigonometry 1	2	-	MA304
Working in Groups	2	-	PD103

