

Construction High School eLearning Program



Learning Topics:

Structural Engineering

Computer-Aided Design

Power and Distribution

Fluid Systems

Thermal Concepts

Surveying

Mechanical Systems

Pneumatics

Hydraulics

Electrical

Measurement Tools

Mathematics

Machine Tools

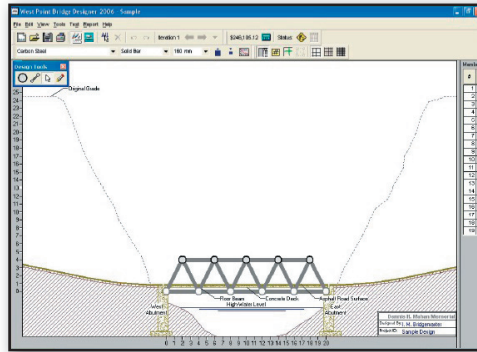
Print Reading

Mechanical Fabrication

Workplace Effectiveness

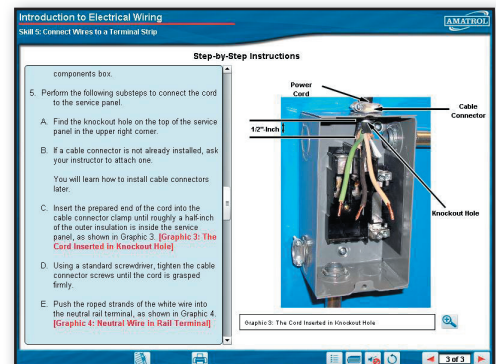
Structural Engineering

Knowledge of structural engineering's basic concepts and applications is essential for any professional working in the construction field. This program area provides knowledge on topics such as types of structures, data acquisition, beam and column design, moments and bending stress, column bending, and bridge design and construction. Courses in this area can be a starting point for careers in architecture.



Electrical

Comprehension of electrical applications and concepts is important for any construction professional, which is why the Construction program thoroughly covers this area. Important topics include electrical system wiring and components, wiring between panels, wire color coding, raceways, and conduits. Students interested in these courses might consider becoming an electrical engineer.

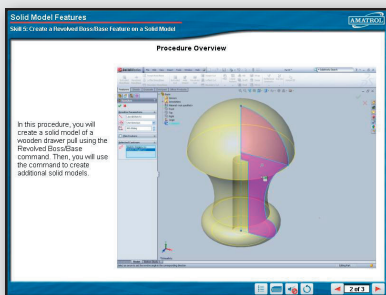
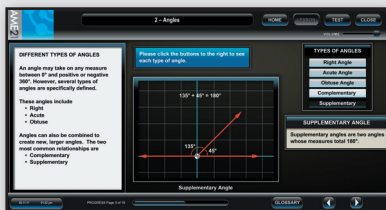
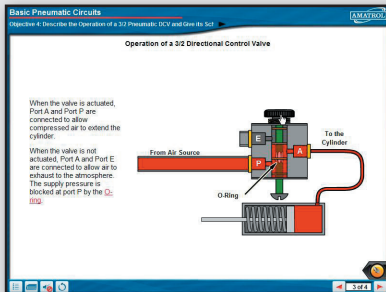
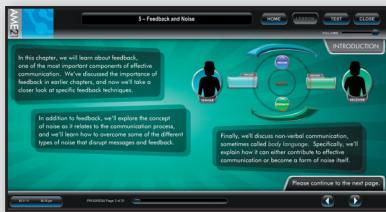


Mechanical Fabrication

As the cost to produce goods increases, mechanical fabrication plays an increasingly vital role in today's economy. Within this area, students will focus on the proper, safe application of hand tools for industry-relevant assembly and skills. Students will learn about threaded fasteners, wrenches, screwdrivers, pliers, mallets, portable power tools, and pneumatic fabrication fittings. This area will be helpful to anyone interested in the construction field.



Construction 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 Construction 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
CAD1	8	SolidWorks	W-12273
CAD2	6	SolidWorks	W-12274
Communication Skills	2	-	PD101
Conflict Resolution	2	-	PD102
Electrical Fabrication 1	6	-	W-12204
Electrical Power Distribution	10	-	W-17471
Electrical Relay Control	12	-	W-VTB703
Environmental Applications	8	-	W-11605
Fluid Systems 2	10	-	W-11607
Industrial Electrical Wiring	6	-	W-17451
Machine Tools 1	12	-	W-VTB701
Mathematics 1	2	-	MA101
Measurement Tools	12	-	W-VTB725
Mechanical Fabrication 1	8	-	W-19004
Mechanical Fabrication 2	8	-	W-B745
Mechanical Systems	12	-	W-VTB728
Print Reading 1	8	-	W-12207
Structural 1	6	Bridge Designer	W-11600
Structural 2	4	Bridge Designer	W-11601
Surveying	6	-	W-11602
Thermal Science	8	-	W-11604
Trigonometry 1	2	-	MA304
Working in Groups	2	-	PD103

