

Introduction to ACE

This course is designed to give students a basic introduction and overview to the topics available within the Industrial Technology Department. It will cover a wide range of study of the following areas; Architecture and Construction, Graphic Communication, Manufacturing, Power and Energy, and Transportation. Most units will include safety, hands-on work, and in some areas a project. The curriculum is designed around exploration of these systems and their impacts on society. Students will also develop problem-solving skills, explore career awareness, and relate technology to math and science.

Construction Material Processing

Students will continue to develop team building skills introduced in Introduction to ACE. This is the foundational course for the architecture and construction cluster. Students will learn proper construction terminology and safe instruction in hand and power tool usage through project construction. Students will experience plan development, reading project drawings, material identification, cost estimation and production.

Construction Technology

This course will introduce construction systems used in residential and commercial projects. Students will be responsible for the construction of individual and/or group project(s) built throughout the semester. The project(s) will be determined by the needs and wants of the class, community, and school district as well as the experience of the classmates involved.

There will be a wide range of topics; job-site safety, foundations, rough framing, building envelope, exterior finishes, interior finishes, MEP's (mechanical, electrical, plumbing) and other topics within the construction cluster.

EGT-460 Civil Engineering and Architecture (CEA) 3 college credits

Explores the design and construction of residential and commercial building projects. Investigates careers in the design and construction industry. Introduces concepts involved in building design and construction including land use, codes, utilities and services, sustainable design, building components and systems, structural design, storm water management, and cost estimation. Integrates STEM (Science, Technology, Engineering, Math) principles and teaches Revit, an Autodesk 3D design software for course projects.

CON-116 Architectural Plans and Specifications 2 college credits

Introduces the skills and methods for understanding and interpreting construction drawings and technical specifications for residential and commercial buildings.

CON-190 Residential Construction 3 college credits

Provides introductory theory and lab experience in residential construction. The course covers a wide range of topics including but not limited to; lab and job-site safety, foundations, rough framing, building envelope, exterior finishes, interior finishes and MEP's (mechanicals, electrical, plumbing).

CON-272 Commercial Construction 3 college credits

Provides introductory theory and lab experience in basic commercial construction procedures. Primary focus on foundational elements in a variety of construction systems including; foundations, wall systems, masonry, plumbing, HVAC, electrical and interior and exterior finishes. Project coordination and safety will be emphasized.