

TECHNOLOGY EDUCATION CURRICULUM SUMMARY

The purpose of the Technology Education Curriculum Summary is to present an overview of the CAD I (Computer Aided Design and Drafting) curriculum. Parents are the intended audience of the Technology Education Curriculum Summary.

Technological Devices:

- Knowledge and skills needed to operate a computer.
- Knowledge, understanding, and skills needed to access, evaluate, and use information.
- Knowledge and skills needed to operate a 3-D parametric solid modeling software.
- Knowledge and skills needed to select proper storage devices.
- Knowledge, understanding, and skills needed to produce multimedia presentations.

Theory of graphics communication and computer-aided design:

- Traditional 2-dimensional drafting and its limitations.
- Limitations of traditional 2-dimensional design.
- Linkages, and transformations of 2-dimensional drafting and design to 2-dimensional computer-aided design and drafting.
- Boolean operations in primitive 3-dimensional design and drafting.
- Three-dimensional parametric technology in modern design and drafting.
- Basic design processes in 3-dimensional parametric solid modeling.
- Basic 3-dimensional parametric drafting processes with parametric solid models.
- Basic family table, symbolic relations with associative design parameters.

Fundamentals of product research and development:

- New product and reversed engineering product design.
- Introduction to mechanical design in biomechanics and tissue engineering.
- Environmental impacts of product engineering research and development.
- Effective 3-D parametric product marketing with multimedia technologies.

Potential careers in modern product engineering design.

Team dynamics.