



# DESIGN & ENGINEERING TECHNOLOGY

As defined in ITEEA's Standards for Technological Literacy: Content for the Study of Technology, Technology is the modification of the natural environment in order to satisfy perceived human needs and wants. (ITEA/ITEEA, 2000/2002/2007, p. 7)

## STANDARD 1

Students will develop an understanding of The Nature of Technology

## STANDARD 2

Students will develop an understanding of Technology and Society

## STANDARD 3

Students will develop an understanding of Design

## STANDARD 4

Students will develop Abilities for a Technological World

## STANDARD 5

Students will develop an understanding of The Designed World



**2020/  
2021**

## Technology Foundations

**GRADE 9 | HALF-YEAR COURSE**

For students with little or no experience with technology and engineering, this foundations class will expose students to the history, practices and impact of technology, design, and engineering through an intensive hands-on curriculum. Students acquire skills such as technical drawing, efficient problem solving, and how to safely and effectively use tools and resources like 3D printers, basic hand tools and simple machinery. This course builds a well-rounded foundation of skills and knowledge required for more advanced courses.

**PREREQUISITE: NONE**

## Technology II

**GRADE 10 | FULL-YEAR COURSE**

Students will learn the universal language of technical drawing, modeling and basic coding that is required throughout the design and engineering world. Mechanical drafting and sketching lay the groundwork for computer aided drawing techniques. Using both a traditional keyboard / mouse and drawing tablets, students will learn how to use industry standard software. Students also learn basic modeling, 3D printing, and coding in preparation for higher-level courses.

**PREREQUISITE: 85% OR HIGHER IN TECHNOLOGY FOUNDATIONS**

## Technology III

**GRADES 11, 12 | FULL-YEAR COURSE**

This Technology class creates the opportunity for new skill development while also relying on knowledge acquired in previous years of Technology classes. This class will cover topics including fabrication, modeling, design, robotics, coding and problem solving. Relying on previous skills like measuring, technical drawing, and 3D modeling, this class will allow students to use the makerspace, computer lab and 3D printers as resources to create valuable solutions to complex problems. Because of their proficiency, students in this class will have more autonomy when using these resources than in previous technology classes.

**PREREQUISITES: 85% AVERAGE OR HIGHER IN PREVIOUS TECHNOLOGY CLASS**