



# ENGINEERING

The Engineering program of study focuses on the design, development and use of engines, machines & structures. Students will learn how to apply science, mathematical methods & empirical evidence to the innovation, design, construction, operation and maintenance of different manufacturing systems.

LEVELS	COURSES				
Level 1	Introduction to Engineering (PLTW) 1835CT / 9 -12 Weighted Credit				
Level 2	No courses offered at Level 2 in this program of study.				
Level 3	Principles of Engineering (PLTW) 1836CT / 11-12 Prerequisite: Intro to Engineering AND Algebra I AND Biology AND Chemistry OR IPC OR Physics Weighted Credit, <b>Science Credit</b>	Computer Integrated Manufacturing (PLTW) 1838CT / 10-12 Prerequisite: Introduction to Engineering Weighted Credit <b>+ Autodesk Certified User in Inventor Certification Possible</b>	Aerospace Engineering (PLTW) 1834CT / 11-12 Prerequisite: Principles of Engineering Weighted Credit	Civil Engineering & Architecture (PLTW) 1861CT / 11-12 Prerequisite: Principles of Engineering Weighted Credit	Environmental Sustainability (PLTW) 1125CT / 9-12 Prerequisite: Intro of Engineering AND Biology, can take concurrently Weighted Credit
Level 4	Edu-Drone I 1860CT / 11-12 Prerequisite: Algebra I AND must have driver's license by the end of the semester <b>+ FAA Part 107 Remote Drone Pilot Cert Possible</b>	Engineering Design & Development (PLTW) 1845CT / 11-12 Prerequisite: CIM OR AE OR CE Weighted Credit		Practicum in STEM 1857CA-CB / 12 Prerequisite: A Level 3 STEM or IT course AND Selection Process	

1 Semester Home Campus	2 Semester Home Campus	1 Semester Ben Barber	2 Semester Ben Barber
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OCCUPATION	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Aerospace Engineer	\$110,843	481	9%
Industrial Engineer	\$97,074	1,263	10%
Mechanical Engineer	\$91,707	1,535	11%
Chemical Engineer	\$112,819	474	9%
Electrical Engineer	\$98,405	1,137	10%

## INDUSTRY BASED CERTIFICATIONS

**+ Autodesk Certified User in Inventor** - Introduction to Engineering Design

This certification exam demonstrates entry-level knowledge that includes creating, modifying, formatting & sharing 2D sketches, creating parts, viewing & animating assemblies & creating presentations & drawings.

**+ FAA Part 107 Remote Drone Pilot** - Edu-Drone I

This certification exam assesses knowledge & skills related to: applicable regulations related to small unmanned aircraft system rating privileges, limitations & flight operations, airspace classifications, operating requirements, etc.

*The district will pay 100% of the cost of the certification test if students can show mastery by passing a certification practice test AND maintain an 80+ overall course grade at the time of the certification test. If students don't meet the requirements above, they must pay 100% of the cost of the certification test.*

Students must have successfully completed a level 1 or 2 course AND a level 3 or 4 to take a practicum course.

**To earn a CTE endorsement, an MISD student must take 4 or more credits in the same endorsement area, with at least 2 of 4 credits within the same program of study and must include at least one Level 3 or Level 4 CTE course.**