

Business & Industry Pathway – Precision Metal Manufacturing



Precision Metal Manufacturing Courses are only offered at Klein Forest High School.

Courses that are inclusive for any Pathway or Endorsement are BIM I, Professional Communications, Touch System Data Entry and Career Preparation

--- Recommended Sequence
→ Required Sequence

PRINCIPLES OF MANUFACTURING

KISD #: 965818 **PEIMS:** 13032250
Grades: 9-10 **1.0 Credit**
Prerequisite: None

In this course, students gain knowledge and skills in the application, design, production and assessment of products, services and systems. Student will explore the various fields in metalworking and will receive experience in the use of precision and non-precision tools as they learn the basic operations of manufacturing. Students will be involved in the problem solving process, safety with hand tools and power tools, familiarization of machining techniques

Required Fee/Materials: Yes
Note: Offered at Klein Forest High School

DIVERSIFIED MANUFACTURING

KISD #: 965618 **PEIMS:** 13002650
Grades: 10-11 **1.0 Credit**
Prerequisite: None

Students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems and how those knowledge and skills are applied to manufacturing.

Required Fee/Materials: Yes
Note: Offered at Klein Forest High School

PRECISION METAL MANUFACTURING

KISD #: 966218 **PEIMS:** 13032500
Grades: 10-11 **2.0 Credit**
Prerequisite: Diversified Manufacturing

Precision Metal Manufacturing is the first part of a two-year program which prepares students to enter the workforce in the machine trades industry. Students will learn manual machining operations on the lathe, mill, and drill press. Instruction will include practices in work habits, career goals, blueprint reading, mathematics, measurement, and safety. Machine practices learned will include CNC, cutting, and heat treating.

Required Fee/Materials: Yes
Note: Offered at Klein Forest High School

KISD #: 966618

Grades: 11-12

Prerequisite:

PEIMS: 13032600

2.0 Credit

Precision Metal Manufacturing

Advanced Precision Metal Manufacturing is the second part of a two-year program which prepares students to enter the workforce in the machine trades industry. This course will provide students with advanced knowledge of computer numerical controlled (CNC) machining. In addition to learning MasterCam programming and operation, the students will learn Level 2 of milling and operating the lathe. Students will learn to write programs without the use of CAD, design projects and develop machine setup techniques.

Required Fee/Materials: Yes
Note: Offered at Klein Forest High School

PRACTICUM IN MANUFACTURING

KISD #: 966318 **PEIMS:** 13033000
Grades: 12 **1.0 Credit**
Prerequisite: Advanced Precision Metal Manufacturing

Student will gain knowledge and skills in the application, design, production and assessment of products, services and systems. The Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. Student will explore the various fields in metalworking and will receive experience in the use of precision and non-precision tools as they learn the basic operations of manufacturing. Students will be involved in the problem solving process, safety with hand tools and power tools, and familiarization of machining techniques.

Required Fee/Materials: Yes
Note: Offered at Klein Forest High School

ADVANCED PRECISION METAL MANUFACTURING