

MECHATRONICS 1 – 4
COURSE CODES: 6210, 6211, 6212, 6213
EQUIPMENT LISTING

Equipment list is not all-inclusive; school districts have various types of industries which may dictate additional equipment to meet area business and industry requirements.

MECHATRONICS 1

AC/DC Electrical Trainer and components

- Bread Boards
- Electronic Component Sets
(Resistors, Capacitors, Diodes, SCR Switches, Transistors, etc.)
- Wire (Solid and Strand)
- Wire Cutters
- Wire Strippers
- Soldering Iron and Solder
- Power Supplies
- Multi-Meters
- [Future-Tek Troubleshooting Trainers](#)

Hand and Power Tools

- Torque Wrench
- Combination Wrenches
- Socket Set
- Pliers
- Hammers
- Tape Measures
- Squares
- Drill and Driver
- Miter Saw
- Drill Press
- Fasteners and Anchors

Precision measurement kits to include:

- Micrometers
- Dial Calipers
- Straightedges
- Items to Measure
- levels
- feeler gauges
- Dial indicators
- Protractors
- Parallels and gauge blocks

- Precision straightedge
- Standard ruler and a metric ruler to measure

MECHATRONICS 2

Programmable Logic Controller Trainers or components

- [Allen Bradley \(PLC\)](#)
- [Siemens \(PLC\)](#)
- Power Supplies
- Din Rail
- Digital and Analog Modules
- Wire (Multi-Strand and Solid)
- Wire Terminals
- Wire Crimping Tool
- NO pushbuttons
- NC pushbuttons
- Relays
- Solenoids
- Optical Sensors
- Inductive Sensors
- Proximity Sensors
- Limit Switches
- DC Motors

ELECTRICAL INDUSTRIAL CONTROLS

- [MecLab Tabletop Programmable Manufacturing Units](#)

FLUID POWER (PNEUMATICS)

- [Electro-pneumatic circuit Trainers](#)
- Pneumatics Trainer or components
- Air Compressor
- Pneumatic Tubing and Fitting
- Pneumatic Control Valves
- Solenoid Control Valves
- Single and Double Acting Cylinders
- Pneumatic Push Buttons, Selectors
- Electric Push Buttons and Selectors
- Relays
- Terminal Blocks
- Electrical and Pneumatic Limit Switch
- Pneumatic Motors
- Solenoids

MECHATRONICS 3

MOTOR CONTROLS AND STARTERS

- [Industrial Motor Control System Trainer or components](#)

HYDRAULICS

- [Hydraulics Trainer Components](#)
- Directional control valves (DCV)
- Hydraulic Pump
- Hydraulic Motors
- Hydraulic Actuators
- Hoses and Fittings

ELECTRICAL TEST EQUIPMENT

- Clamp-On Ammeter
- Multimeter
- Frequency meter
- Oscilloscope (Optional)
- Voltage tester
- Megger (Optional)

Mechatronics 4

MECHANICAL DRIVE SYSTEMS

- [Mechanical Drives Trainers](#)
- Pulleys
- Belts
- Gears
- Bearings and Pillow Blocks
- Couplings
- U-Joints
- Drive Shafts
- Motors
- Gear Boxes
- Sprockets
- Chains
- Grease and Lube
- Tensioners
- Deflection Gauge (Tension Gauge)
- Alignment Tools (Laser, Dial Indicator)

ROBOTICS SYSTEM TRAINER OR COMPONENTS

- [ABB](#)
- [Fanuc](#)
- [Kuka](#)
- [Festo Robotic Arm](#)