

ELECTRICAL ENGINEERING

This recommended list is based upon a classroom size of 25 students. All costs are estimated and should be adjusted and verified with current quotes. No specific equipment vendor or brand names are endorsed due to various possibilities, but school districts should consult with stakeholders to ensure industry-recognized equipment and software are purchased. The intent of this list is to provide school districts with guidance on the equipment needed to cover the state standards for an Electrical Engineering program.

CLASSROOM EQUIPMENT**TOTAL: \$17,910**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Workstations w/chairs	\$400	\$10,000
1	Teacher Workstation w/chair	\$400	\$400
1	Teacher Computer (enhanced graphics/memory/storage, download capable)	\$2,500	\$2,500
1	Presentation Equipment (e.g., interactive whiteboard (IWB), or other interactive display system with software and accessories)	\$3,000	\$3,000
1	Networkable Laser Printer (black/white or color)	\$400	\$400
1	Vertical File Cabinet (lockable)	\$330	\$330
2	Storage Cabinets (36" x 12" x 72") (lockable)	\$300	\$600
2	Bookcases (36" x 12" x 42")	\$115	\$230
2	White Boards (4' x 8')	\$110	\$220
1	Fire Extinguisher	\$130	\$130
1	First Aid Kit	\$100	\$100

PROGRAM EQUIPMENT**TOTAL: \$91,200**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers (enhanced graphics/memory/speed, download capable)	\$2,500	\$62,500
1	Technology Storage/Charging System (optional)	\$2,000	\$2,000
3	Waveform Analyzer	\$2,000	\$6,000
3	Digital, Analog, RF and Audio Signal Generators	\$2,000	\$6,000
7	Analog Oscilloscopes	\$1,000	\$7,000
7	Video Signal Generators	\$600	\$4,200
7	Mounted Soldering Station	\$500	\$3,500

INSTRUCTIONAL MATERIALS**TOTAL:****\$5,000**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Textbooks (Approved by NDE)	\$100	\$2,500
1	Teacher Textbook Edition and Resources	\$500	\$500
Varies	Instructional Resources (computer-aided design and drafting [CADD] software, coding software for students, manuals, posters, etc.)	\$2,000	\$2,000

INSTRUCTIONAL SUPPLIES**TOTAL:****\$13,005**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
2	Printed Circuit Board (PCB) Shear	\$150	\$300
7	Dual-Range Force Sensors	\$115	\$805
2	Compact Scales (2000 g x 1 g)	\$85	\$170
7	Variable DC Power Supplies, 18V 0-2A	\$65	\$455
15	Work Lamps	\$50	\$750
15	Digital Multimeters	\$25	\$375
15	Dial Calipers, 6", Steel (graduated to 0.001 inches)	\$20	\$300
Varies	Supplies (soldering materials, bread boards, circuit board material, transistors, resistors, integrated circuits, switches, etc.)	\$3,000	\$3,000
Varies	Microcontrollers	\$1,500	\$1,500
Varies	Circuit Board holders, various sizes	\$1,500	\$1,500
Varies	Supplies (various types of paper, printer ink, sketching pencils, lead, erasers etc.)	\$1,000	\$1,000
Varies	Project Supplies (e.g., light-emitting diodes [LEDs] in various colors, single AAA battery holders, push-button switches, resistor kits and wires, solderless breadboards, alligator leads, masking tape, lo-temp full-size glue gun, glue sticks, various syringes, items for sorting)	\$1,000	\$1,000
Varies	Tools and Hardware (e.g., 25' metal tape measures, clamp lights and bulbs, adjustable wrenches, wrench sets, wire strippers, needle nose pliers, locking pliers, hex key sets, hacksaws and blades, files and file handles, hickory hammers, drill bits, precision screwdriver sets, S-hooks, utility knives and blades)	\$800	\$800
Varies	Computer Accessories (cases, covers, etc.) (optional)	\$500	\$500
Varies	Personal Protective Equipment (PPE) (gloves, glasses/goggles, etc.)	\$300	\$300
Varies	Clamps (various sizes)	\$250	\$250

OTHER

TOTAL:

\$300

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Occupational Safety and Health Administration (OSHA) Instructor Training	\$300	\$300

CATEGORY TOTALS:

CLASSROOM EQUIPMENT	\$17,910
PROGRAM EQUIPMENT	\$91,200
INSTRUCTIONAL MATERIALS	\$5,000
INSTRUCTIONAL SUPPLIES	\$13,005
OTHER	\$300
ESTIMATED PROGRAM TOTAL	\$127,415