



Program Requirements

- **Books/software:** Visit pine.edu/campus-store for details
- **Laptop:** Premium version required—visit pine.edu/supplies for required specifications
- **Tools/supplies:** \$800 - \$1,900—see details below
- **Uniform:** Not required

Tool/Supply Requirements

The easiest way to purchase these tools is online. There are a large number of suppliers on different sites where you can price shop. If you already have the listed tools that are similar feel free to use those. They do not need to be new.

Tools Required for AENG 1231 Materials and Manufacturing Processes & Applied Engineering Lab Work (1st Year)

| Tool Name | Description | Estimated Cost |
|---------------------------------------|--|----------------|
| 3/8" socket set | SAE and metric | \$20 - \$40 |
| Flat wrench set | 5/16"-11/16" | \$20 - \$40 |
| Allen wrench set | SAE and metric, Eklind 22 piece metric ball hex-I key set (13222) | \$30 |
| Tool box or chest | One that can be secured | \$50 - \$350 |
| 7" speed square or combination square | WORKPRO aluminum alloy carpenter square and zinc-alloy square ruler set - 7" rafter layout tool and 12" combination square combo | \$10 - \$25 |
| 15'-25' tape measure | | \$10 - \$30 |
| Automatic center punch | | \$5 - \$10 |
| Safety glasses | | \$5 |
| 6" dial caliper | Stainless steel, 0"-6" range, .001" accuracy, Amazon Fowler 52-008-706 | \$60 - \$100 |

Tools Required for MTTP 1201 Basic Machine Shop (1st Year)

| Quantity | Description | Estimated Cost |
|----------|---|----------------|
| **1 | Safety glasses with side shields OSHA approved, non-prescription | \$100 - \$200 |
| 1 | 6" scale (steel rule) in fractions, 32nds, 64ths, 50ths, and 100ths | |
| **1 | High speed steel with 5% cobalt lathe bits 3/8" x 3/8" | |
| **1 | 3/8" brazed turning tool (right hand) | |
| **1 | 1/2" end mill (2 and/or 4 flute) | |
| 1 | 6" or 8" caliper - digital or dial type (preferred), NO plastic caliper | |
| 1 | Small brush/dustpan | |
| 1 | File with handle | |
| **1 | Wide marker (Sharpie) | |
| 1 | Wrench, hex key 1/32" - 3/8" | |

Tools Required for MTTP 1201 Basic Machine Shop (1st Year), continued

| Quantity | Description | Estimated Cost |
|----------|---|----------------|
| 1 | Wrench, hex key metric 2-8 | \$100-\$200 |
| 1 | Spray bottle for coolant | |
| 1 | Tool box with lock (maximum size 36" long x 24" wide x 50") | |

**Available in the campus store

Tools Required for Automation Classes (2nd Year)

| Tool Name | Description/Suggested | Estimated Cost |
|--------------------|---|----------------|
| Digital multimeter | Must read up to 24 VDC. Cheaper models are accepted if only used for low voltage readings. | \$50 - \$100 |
| Screw driver set | Wiha 32092 slotted and Phillips insulated screwdriver set, 1000 volt, 6 piece | \$50 |
| Wire stripper | Wire stripping cutter tool, strong gripping serrated nose, double grip comfortable handle Klein Tools 11055 | \$20 |

Notes

Some tools and supplies may be available for purchase at the campus store. If you have financial aid funds available, you may use financial aid for these items, provided the purchases are made through the campus store.

If your program requires a specific laptop, you may also use financial aid to purchase it through the campus store. However, laptops do not need to be purchased through the campus store—you may choose to buy from another retailer. If purchasing a laptop elsewhere, it is the student's responsibility to carefully review the required specifications for their specific program to ensure compatibility.

For questions about using financial aid in the campus store, please contact the bookstore staff or your student success advisor.

Disclaimer

This tool and supply list is accurate as of the date of printing. However, items and requirements are subject to change without prior notice. For the most up-to-date information, please contact the program faculty directly.

Last date reviewed: April 2026