UTK FAB LAB Equipment

Digital Equipment

Robotics
- ABB IRB 140 (2 available)
  - 6 axis
  - 810mm reach
  - 6 kilogram payload

Abrasive Water Jet Cutting
- Omax Maxiem- 10’ x 5’ bed size, 30 hp pump, 0.013 nozzle diameter.
  Acceptable Materials- Most materials can be cut on the waterjet, This machine can cut all metals and plastics, as well as rubber and wood. The material must be resistant to moisture, so wood is not recommended.

CNC Vertical Machining Center
- Haas- VF-2
  - 30” x 16 x 20” Travel
  - 3 Axis
  - 30hp Spindle
  - 20 Station Tool changer
  - Acceptable Materials- Most metals

CNC Router (2 Available)
- Shopbot Alpha
  - 3 axis machine with a rotational 4th axis installed
  - 8’ x 4’ x 4.5” material (3 axis)
  - 32”x 10” x 10” (4th axis)
  - Vacuum Hold-down
  - Acceptable Materials- Wood & Timber products, plastics (no metals)
- Shopbot Desktop
  - 3 axis
  - 24” x 18” x 2.5”
  - Acceptable Materials- Wood & Timber products, plastics (no metals)

Laser Cutting
- ULS VLS 6.60
  - 60 Watt Laser
  - 32” x 18” cutting area
  - Air Assist
  - Acceptable Materials- Wood & Timber products, Acrylic, some fabrics, metals Polycarbonate(Lexan), copolyester, and PVC must not be cut.

3D Printing
- Makerbot Style 3d printing (2 available)
  - 8.9” x 5.7” x 5.5” build area
  - PLA Print media (black print media supplied)
  - 0.2mm Resolution
Upper Level
Woodshop- Table saw 2x saw stop, 1 x delta table saw (all saws 3” max thickness)
Jointer- 8”
Planner – 22”
Bandsaws
Sanders- 24”Drum , 12” disc/ 36” edge, vertical belt, oscillating spindle sander
14” Radial Arm saw
12” Chop saws
Hand and portable power tools (electric and pneumatic) to complete most applications
Drill press
Wood Lathe
Jessem Router Table
Leigh Dovetail Jig
Industrial Sewing Machine
Hot Wire Foam Cutting

Lower Level
Welding- Mig & Tig
Oxy acetylene torch
Plasma Cutting
Vertical Band saw
Horizontal Band saw
Diamond cutoff wheel
Drill Press
Bridgeport style Knee mill – 50”x9” table
Metal Lathe- Bench top 11”x 26”
Hydraulic sheer- 6’ shearing length, ¼ Mild steel, 3/16 stainless capabilities
Foot sheer- 4” shearing length, 16 gauge Mild steel
Hand Finger Brake- 4” bending length, 16 MS gauge capacity