

NOTICE TO STUDENTS: Purchase Books and the required Drafting Kit at the school bookstore as they become available. **DO NOT PURCHASE EQUIPMENT OR SUPPLIES MARKED WITH * UNTIL YOU HAVE DISCUSSED THIS LIST WITH YOUR INSTRUCTOR.**

FIRST QUARTER:

GENERAL EQUIPMENT: (Purchase First Quarter) for use in all following quarters:

- *Scientific calculator (See instructor before purchasing)
- *Safety glasses (or safety approved eyeglasses with side shields for shop)
- *Steel tape measure (at least ½" wide x 10' long, any good quality brand)
- Three-ring notebooks (1-1/2" rings, lays flat) (1 per subject - minimum of 2)
- Notebook index dividers (5 tab format), 2 sets for each Three-ring notebook purchased above (10 dividers each notebook)
- *Paper, Engineering grid Notebook paper, 5 squares/in, green, 3-hole punched, with Header rows (see instructor) (will be used in all engineering classes)
- Computer memory device - USB Drive (1 GB Min.)
- Set of personal headphones/buds for training videos (Std. headphone plug)
- *Cam lock (3/4" diameter for 7/8" thick drawer)

FIRST or SECOND QUARTER Drafting Supplies:

(Check your Schedule – the tools in this section will be required for the class called CAD114 Engineering Graphics/CAD 1. This course may be scheduled in either your first or second quarter of classes)

DRAFTING EQUIPMENT: (Purchase for your First Engineering Graphics class for use in all following quarters):

Required Drafting Tools: (may be in one drafting kit)

- Small Drafting Triangles (2): professional quality acrylic, (45 X 4", 30/60 X6")**
- Circle template, inch sizes up to 1.375 dia. (Alvin TD1200, Staedtler 977 110 or equivalent) **
- Eraser (plastic, for drafting film) (Staedtler 526 50X or equivalent)**
- Colored pencils (1) red, (1) blue (general purpose)**
- Kneading eraser (graphite cleaner) **
- Drafting Measuring Scale: Mechanical/Combination, 6" or 12", (must measure in 32nds of an inch, decimals of an inch, and mm's) (Hearlihy P235MT) or (Alvin 119PC) (or a combination of other scales with these measurements) **
- 3-Ring pencil pouch, 8.5 x 11" (Staples 26190 or equivalent)**

**Note: Some tools listed here are available in a kit from the Bookstore – you only need to buy one set of tools. Note: Check contents of any kit. Some years the kit combination may vary and you will need to purchase some items separately – especially mechanical scales.

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CAD Design & Drafting / Mechanical Engineering Technology
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*Optional Drafting Tools (Only buy these if you would like to have all your own tools to take with you instead of using class tools).

- Large Drafting Triangles (2): professional quality acrylic, (45 X 10", 30/60 X 10")
- 6" drafting compass (professional quality) Alvin 201 or 55140 Staedtler**
- Scales: (1) Civil, 6" or 12" (Alvin 111P, Staedtler-Mars 987 19-34 or equivalent)
(1) Architectural, 6" or 12" (Alvin 110P, Staedtler-Mars 987 19-34 or equivalent)
(1) Metric, 6" or 12" (Alvin 117PM or equivalent)
- Eraser shield, metal (Staedtler 529 50 or equivalent)**
- Drafting tape, ½" (Scotch 3M #021200-07033 or better, or Drafting "Dots" – no masking tape)
- Sandpaper pad (sharpen compass lead)
- Drafting dusting brush**
- General purpose drafting template (Berol Rapidesign R-18)

SECOND & THIRD QUARTERS:

- Three-ring notebooks (1-1/2" rings, lays flat on desk) (1 per new subject as req'd)
- Notebook dividers (recommend 10 dividers for each notebook above as req'd)
- *Paper, Engineering grid Notebook paper, 5 squares/in, green, 3-hole punched, with Header rows, as required (see instructor)
- *Computer memory device as required (USB Drive (4GB Min.))
- *Calipers for measuring .001" increments – professional quality, 4" or 6" (can be steel or composite) (**see instructor**)
- *4" or 6" steel rule to measure into 50ths and 64ths (**see instructor**)
- Steel protractor/depth gage (Angle-Finder) (General #19 or better) (**see instructor**)
- Substantial Footwear (Shop Practices & Project Labs) (**see instructor**)
- Optional: *Leather Gloves (Shop Practices & Project Labs) (**see instructor**)

FOURTH, FIFTH & SIXTH QUARTERS:

- Three-ring notebooks (1-1/2" rings, lays flat on desk) (1 per new subject as req'd)
- Notebook dividers (10) per notebook above (as required)
- *Paper, Engineering grid Notebook paper, 5 squares/in, green, 3-hole punched, with Header rows, as required (see instructor)
- *Computer memory device as required (USB Drive (4 to 8GB Min.))

*** FOR EACH ITEM MARKED WITH AN *, CHECK WITH INSTRUCTOR BEFORE PURCHASING AS OPTIONS OR BRAND NAMES MAY VARY.**

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SCC CAD Design and Drafting; Mechanical Engineering Technology BOOKS:

Books are listed by course number below. Use the CAD or Mechanical Design course schedule to determine which books are required for each quarter.

Note: Prices listed are approximate and may vary depending on where items are purchased.

<u>COURSE TITLE</u>		<u>REQUIRED/OPTIONAL TEXTS</u>
CAD and Mechanical Engineering Tech Courses		
CAD 101	Introduction to Technology	(No new text required)
CAD 111	Applied Technical Math 1	Technical Mathematics
CAD 114	Engineering Graphics/CAD 1	Engineering Drawing and Design, 6 th Ed Madsen; AutoCAD Tutorial First Level Shih
CAD 120	Basic Blueprint Reading	(Same text as CAD114)
CAD 121	Applied Technical Math 2	(Same text as CAD111)
CAD 124	Engineering Graphics/CAD 2	(Same text as CAD114)
CAD 133	Introduction to Design	(Same text as CAD 114) plus Machinery's Handbook 24th edition or higher
CAD 137	Applied Tech Math & Physics	(Same text as CAD111)
CAD 141	Shop Practices	(No new text required)
CAD 142	CAD Solid Modeling/Graphics 1	SolidWorks Basic Tools Tran (Check with appropriate instructor)
CAD 242	Mechanical Design Fundamentals	Machinery's Handbook, 24th edition or higher
CAD 243	Building Systems Mechanical CAD Applications	(Optional: Solid Professor Subscription)
CAD 244	Structural CAD Applications	(Optional: Solid Professor Subscription)
CAD 246	Manufacturing Processes/Measuring	(Same text as CAD114)
CAD 251	Applied Tolerancing & GD&T	(Same text as CAD114)
CAD 252	CAD Solid Modeling/Graphics 2	SolidWorks Advanced Techniques Tran (check with instructor) (includes text from CAD142)
CAD 255	Technical Applications 1	(No new text required)
CAD 256	Mechanical CAD Applications	(No new text required)
CAD 258	Schematic CAD Applications	(No new text required)
CAD 260	Fabrication & Piping CAD Applications	(No new text required)
CAD 261	Project Design	(No new text required)
CAD 264	Technical Applications II	(No new text required)
CAD 265	Manufacturing & Measuring Systems	(No new text required)
CAD 268	Schematics/Advanced CAD	(Same text as CAD114)
CAD 269	Civil CAD Applications	(Same text as CAD114)
Non-CAD or MET Courses		
APLED 112	Applied Mathematics	(Check with appropriate instructor)
APLED 121	Applied Written Communications	(Check with appropriate instructor)
APLED 123	Applied Communications	(Check with appropriate instructor)
APLED 125	Employment Prep	(Check with appropriate instructor)
PHYS 101	Applied Physics	(Check with appropriate instructor)

***Note: For Non-CAD/MET courses, check with appropriate instructor before purchasing books.**