

INDD-101 & IDF-507
Design I for Industrial Design
Havens & Kazakia
Fall 2022

Recommended 2D, 3D, and Design Drawing Materials and Tools

Welcome to Design 1 for Industrial Design!

The materials and tools on this list will allow you to complete your Design I work professionally and will be useful for all 4 years in the program. The list is not all-inclusive. Other materials will be demonstrated in class, and some materials will be provided for you.

PLEASE NOTE: It's not necessary to have every one of these items at the start of the semester.

We'll be creating 5 main projects over the course of the semester in the Design 1 Studio. This list details the materials required for each individual project. While it's not necessary to have all the materials on the list at the start of the semester, **it's absolutely crucial that you have each project's required materials at the beginning of that specific project.** Not having the materials at the project outset will compromise your design and fabrication time, usually resulting in a lowered grade.

If you're purchasing materials on a project-by-project basis, please purchase locally in person or be sure to factor in 1 to 2 weeks of shipping time for the materials to arrive in time for the start of the project that they will be used in.

Accompanying most of the items on this list is a web link shown in blue. Simply click and you'll link to a specific web page for that tool. Please note that these are links to *suggested* vendors only, you may purchase from wherever you like. Also, keep in mind that there are alternatives to purchasing all of the listed items brand new. Gently-used tools and quality old tools work great in a lot of cases.

The prices shown for a number of the art supplies are from an online supplier called "MisterArt" (misterart.com) – terrible name but good company. They offer sizable discounts on materials – up to 75% with free or reduced shipping if you join their buying club. Another good online source is "Blick" – (dickblick.com). It's worth noting that there's a Blick retail store in Center City Philadelphia that is accessible by the #32 SEPTA Bus Route that goes right past our campus.

The prices on most of the tools come from another online source, "Harbor Freight Tools" (harborfreight.com). This company has reasonably-priced tools and also offers heavy discounts. These are not the best tools, but they're great to use while you're learning – you can replace them with the good tools AFTER you've beat up the cheap ones.

Remember, it's not mandatory that you purchase any of the materials online or from the listed companies – but it may be easier and cheaper than visiting retail stores. The Jefferson School Store here on campus might have some but definitely not all of what you need (and sometimes it will be at a higher price point).

You are encouraged to work light and not stockpile tools and materials at your desk on campus. It will be most convenient for you to divide your tools into a "Mobile" set that is carried back and forth as well as an "In-Studio" set that you use mostly in Hayward Hall. (While you should divide your sets up in the way that works best for you, all tools/supplies in the ID Toolkit PDF are marked with a recommendation of "Mobile" or "In-Studio" as a starting point.)

One of your first Design I Studio grades will be for having the necessary materials and tools for our first project. Take the easy "A" and go shopping before school begins.

Please email Professor Mark Havens (mark.havens@jefferson.edu) with any questions.

GENERAL ITEMS

PRIMARY STUDIO STORAGE – REQUIRED



1) Sterilite Footlocker, 16 Gallon - (In-Studio)

This trunk is required storage for all D1 Studio students.
Please be sure to purchase a padlock for use with this.

Walmart Item# 571974961 – \$26.98

ADDITIONAL MOBILE STORAGE – OPTIONAL



2) Plano Portable Tool Box, 20" - (Mobile)

This toolbox an optional addition and can be useful for organization and portability.
If you elect to purchase this, please be sure to get a padlock as well.

Amazon Item# B0032Y8RIS – \$18.98

MASK – REQUIRED



3) 3M/MSR (or equivalent) half-face NIOSH respirator - (Mobile)

3M/MSR (or equivalent) half-face NIOSH respirator, or at least an N95/KN95 dust mask, preferably without the exhale valve. Please note that this is intended for shop dust and paint spray. A standard cloth mask is OK for class. Please get in touch if you cannot obtain these.

Home Depot Internet #202080143 – Model # 65021HA1-C – Store SKU #275703– \$35.27

PROJECT 1 – EIGHT REQUIRED ITEMS

ALL 8 ITEMS MUST BE IN-HAND BY: TUESDAY, 8/23 (1ST CLASS)



1) 30/60 Degree 12in. Plastic Triangle - (Mobile)

Alvin, SK360-12, 12" Smoke-Tint Triangle Ruler, Math Geometry Tool - 30/60 Degrees

Amazon Item# B000HEUWD4 – \$7.97



2) Tracing Paper (Get several pads – you'll be using a lot of this) - (Mobile)

Pacon Art 1st Tracing Paper Pads Standard grade transparent paper in pad format that can be used for sketches and overlays. 40 sheets per pad. 9 in. x 12 in.

Mister Art Item# 66317 – \$2.92



3) Drawing Paper (Four pads should do the trick) - (Mobile)

Strathmore Student Art Drawing Paper Pad (40 sheets) 9 in. x 12 in.

Mister Art Item# 89053 – \$3.49



4) Pencil Sharpener - (Mobile)

Tacro Receptacle Pencil Sharpener

Mister Art Item# 65091 – \$3.59



5) Pencils (Box of 12) - (Mobile)

Number 2 (Plain ol' Ticonderogas are the best for our purposes)

Mister Art Item# 11223 – \$2.69



- 6) Drafting Tape - (Mobile)**
 1/2 in. x 60 yd. roll
Mister Art Item# 59218 – \$3.49



- 7) Clear Push Pins - (Mobile)**
 Clear Push Pins – Box of 100
Mister Art Item# 81201 – \$1.78

PROJECT 2 – SIX REQUIRED ITEMS
ALL 6 ITEMS MUST BE IN-HAND BY: TUESDAY, 8/30



- 1) Chipboard - (Mobile)**
 One 24 in. x 36 in. sheet
Since this is a large, fragile item to ship it's best purchased in person at Michael's or the Jefferson University Bookstore



- 2) X-Acto No. 1 Precision Knife - (Mobile)**
 Precision Knife with safety cap
Mister Art Item# 29928 – \$4.63



- 3) X-Acto No. 11 Blades - (Mobile)**
 Bulk pack of 100 blades. (Yes, you will need 100 of these).
Mister Art Item# 10450 – \$33.39



- 4) Cutting Mat - (In-Studio)**
 Multipurpose Cutting Mat 18 in. x 24 in. Green or Black
Mister Art Item# 50921 – \$27.99



- 5) 24" Non-Skid Steel Corkback Ruler - (Mobile)**
 Economy Brand Non-Skid Steel Corkback Ruler 1-1/8 in. x 24 in.
Mister Art Item# 50592 – \$6.39



- 6) Elmers Glue-All - (Mobile)**
 7 5/8 oz. bottle (Be sure to get the "Glue-All", not Elmers School Glue, Gel, Wood Glue, etc).
Mister Art Item# 47640 – \$3.85

PROJECT 3 –EIGHT REQUIRED ITEMS

ALL 8 ITEMS MUST BE IN-HAND BY: THURSDAY, 9/15

1) 40-watt LED Soldering Iron Kit - (Mobile)



Please make sure it's 40-watt. Less wattage won't get hot enough for our purposes and more wattage will be too much heat. Please also make sure that it comes with a needle tip, not just a chisel tip. Weller is a good brand but there are others.

Model # SP40NKUS
Home Depot Store SKU# 1000011104
Home Depot Internet# 204195330 – \$21.17

2) Lead-Free Rosin Core Solder (Diameter: 0.03 in.) - (Mobile)



Wherever you decide to get it, please make sure it's rosin core and lead free. The smaller the diameter, the better it will work for our purposes.

Acehardware.com Item# 28973 – \$17.99



3) Helping Hands Tool - (Mobile)

Harbor Freight Item# 60501,319 – \$5.99



4) Aven Soldering Tip Cleaner (Soft Coiled Brass) - (Mobile)

Model # 17530-TC
Amazon # B00LTKUPD2 – \$19.23



5) Solder Sucker - (Mobile)

Adafruit.com Item#148 – \$5.00



6) Safety Glasses - (Mobile)

Impact Resistant Safety Glasses
Harbor Freight Item# 99762, 63851 – \$1.89



7) Extension Cord - (In-Studio)

10ft. Extension Cord
Harbor Freight Item# 62935, 8857, 61995, 62936 – \$6.99



8) Wet-or-Dry Sandpaper Multi-Grit Pack - (Mobile)

A variety pack with multiple grits will come in handy and is available anywhere: local hardware stores, Lowes, Home Depot, etc.

PROJECT 4 – THREE REQUIRED ITEMS **ALL 3 ITEMS MUST BE IN-HAND BY: TUESDAY, 10/4**



1) Hot Glue Gun - (Mobile)

Two or three Dollar Store guns will work or you could get...
Harbor Freight Item# 68334 – \$14.99



2) Hot Glue Sticks - (Mobile)

50 Piece Pkg. of MultiTemp® Full Size Glue Sticks
Harbor Freight Item# 68336 – \$7.99



3) Bristol Board - (Mobile)

Canson XL Recycled BRISTOL Pad
14x17
96 lb (260 gsm) weight
Mister Art Item# 96477 – \$13.59

PROJECT 5 – SUGGESTED ITEMS **PROJECT START: TUESDAY, 10/18**

PLEASE NOTE:

Project 5 is a team project. The deliverable is a working machine. Unlike the other projects in the semester, the design, function, and complexity of the machine are up to each team to decide. As a result, the tools needed to create each team's machine will differ.

Below is a general list of **SUGGESTED** tool possibilities only. Again, should you decide to purchase any of the tools below, new or used, they will be of additional use during your time in the ID program.



1) Masking Tape - (In-Studio)

1 in. x 60 yd. roll
Mister Art Item# 74451 – \$2.93



2) Maped Study Compass - (In-Studio)

Mister Art Item# 48486 – \$2.37



3) Hammer - (In-Studio)

16oz. Claw Hammer with Fiberglass Handle
Harbor Freight Item# 60714, 47872, 69006, 60715 – \$4.99



4) 18V 3/8in. Cordless Drill/Driver - (In-Studio)

Harbor Freight Item# 64118, 56122, 58389 – \$27.99



5) Drill Bit Set - (In-Studio)

Titanium High Speed Steel Numbered Drill Bit Set, 60 Pc.
Harbor Freight Item# 61690, 34627, 63764 – \$19.99



6) Screwdriver Set - (In-Studio)

32-piece Screwdriver Set
Harbor Freight Item# 61259, 90764 – \$8.99



7) Needle Nose Locking Pliers - (In-Studio)

10" Needle Nose Locking Pliers (i.e - Vice Grips)
Harbor Freight Item# 39717 – \$7.99



8) Pliers Set - (In-Studio)

6 pc. Pliers Set
Harbor Freight Item# 64729, 63812, 64103 – \$11.99



9) Tape Measure - (In-Studio)

25ft. x 1" Tape Measure
Harbor Freight Item# 69030, 47737, 69080, 69031 – \$4.99



10) Clamps - (In-Studio)

6 in. Ratcheting Bar Clamp/Spreader
Harbor Freight Item# 64154, 46806, 69045, 62122 – \$3.79



11) Small Spring Clamps - (In-Studio)

22-Piece Spring Clamp Set
Harbor Freight Item# 69374, 8826 – \$4.99



12) Assorted Files - (In-Studio)

5-Piece 12 in. File Set
Harbor Freight Item# 60368, 7520 – \$7.99



13) Combination Square - (In-Studio)

12in. Combination Square
Harbor Freight Item# 63688, 92471, 62968 – 8.99



14) Utility Knife - (In-Studio)

Retractable Utility Knife:
Harbor Freight Item# 3359 – \$2.29



15) Utility Knife Blades - (In-Studio)

50-Piece Blade Pack:

Harbor Freight Item# 60574, 92872 – \$4.99



16) Hacksaw - (In-Studio)

12in. Hacksaw:

Harbor Freight Item# 62780, 40766 – \$4.99



17) Hacksaw Blades - (In-Studio)

12in. 10-Blade Pack:

Harbor Freight Item# 60283, 38758 – \$5.99