

Upholstery Basics — Workbook

This workbook turns the course into bench time. Each section pairs with a course module and gives you fabric-selection drills, yardage worksheets, stripping logs, and build checklists to run on a real chair. Work through it with a piece in front of you and the templates open, so your project starts from a measured cutting list and a labeled set of patterns instead of guesses.

Materials, Tools, and Fabric Selection

Build your toolkit, learn to read a fabric tag, and convert a real piece into an accurate yardage number.

Checklist: Starter Toolkit and Consumables

- Webbing stretcher in hand
- Staple gun (pneumatic or quality electric) plus 1/4, 3/8, and 1/2-inch fine-wire staples
- Staple remover and tack lifter
- Magnetic tack hammer and a tin of No. 3 and No. 6 cut tacks
- Dedicated fabric shears kept only for cloth, plus a utility scissor for foam/webbing
- Regulator, curved needle, and stitching twine
- Foam-safe spray adhesive, bonded Dacron batting, and jute or elastic webbing

Worksheet: Fabric Selection Tag Worksheet

For each candidate fabric, copy the numbers off the bolt-end tag and rate it against how the piece will actually be used. Reject anything whose double-rub rating is below your target for that use before you fall in love with the pattern.

Fabric name / pattern

Fiber content (% and types)

Double-rub rating (Wyzenbeek/Martindale)

Cleaning code (W / S / W/S / X)

Pattern repeat (vertical x horizontal, in)

Railroaded? (yes/no) and nap direction

Intended use and minimum double-rub target

Verdict (use / reject) and why

Exercise: Build a Cutting List and Estimate Yardage

Choose a real piece (start with a drop-in dining seat). Measure every panel you will cover at its widest and longest point, add about 3 inches of allowance per dimension, and write each as a width-by-length rectangle. Lay the rectangles out on a 54-inch-wide strip, total the length, and divide by 36 to get yards. Use the yardage template to do the math.

- What is each panel's measured size and its size after adding allowance?

- How many of your rectangles fit side by side across a 54-inch width?

- If your fabric had a 27-inch repeat instead of being plain, how much extra yardage would matching add?

Stripping and Rebuilding the Foundation

Strip a seat without losing your patterns, assess the bare frame, and re-web it to a firm, drum-tight base.

Worksheet: Strip-Down Layer Log

Before and during stripping, record each layer in the order you remove it so you can rebuild in the same order. Label and photograph every fabric panel as you take it off; these labeled pieces are your cut patterns.
Layer # (1 = removed first)

Layer description (dust cover / outside back / cover / batting / foam / burlap / springs / webbing)

Fastener type and size (staple / No. 3 tack / No. 6 tack)

Panel labeled? (location + top edge + nap noted)

Reuse as pattern? (yes/no)

Frame note at this layer (loose joint / split rail / old glue)

Exercise: Re-web a Seat Frame Drum-Tight

Re-web a bare seat frame with jute or elastic webbing. Fasten a folded end, stretch each strip tight with the webbing stretcher, fasten and fold the far end, then weave the second direction over and under. For elastic webbing, mark and pull to about 10 to 15 percent stretch. Test firmness by pushing each strip with your fist.

- How far does the webbing deflect under a fist push, and is that under about an inch?

- For elastic webbing, what was your relaxed length, your 10 to 15 percent stretched length, and the mark you pulled to?

- Did every fastener land in solid wood, and how many staples or tacks did you use per strip end?

Checklist: Bare-Frame Readiness Checklist

- All staples and tacks removed and collected; frame clean
- Loose joints knocked apart, old glue scraped, and re-glued with clamps
- Corner blocks reinforced with screws where needed
- Stripped tack holes in rails filled with glue and a sliver/dowel for fresh bite
- Spring type identified (coil / sinuous / none) and replacements on hand if needed
- Original layer order written down to rebuild in sequence

Foam, Padding, and Pulling Fabric Tight

Spec and cut foam correctly, then pull the cover drum-tight with even tension and clean corners.

Worksheet: Foam Spec Sheet

Plan the foam before you buy or cut it. Record the density and firmness you are choosing and why, then the cut size (about 1/2 inch oversize per edge). Note your Dacron wrap and any beveled front edge so the seat crowns instead of leaving a hard border.

Seat board size (width x length, in)

Foam thickness chosen (in)

Density (lb/ft³) and reason

Firmness ILD/IFD and feel target

Cut size with oversize (width x length, in)

Dacron wrap? (yes/no) and beveled front edge? (yes/no)

Exercise: Pull a Panel Drum-Tight and Dress the Corners

On a foamed, Dacron-wrapped seat, center the cover, then staple back-center, front-center, and the two side-centers before anything else. Work outward to the corners with alternating opposite pulls at even tension, stapling every 1 to 1.5 inches. Dress square corners with matching pleats or rounded corners with even gathers, all folds pointing the same way.

- Where did wrinkles appear, and which neighboring pulls did you re-tension to remove them?
 - How many staples did you pull and reset before the surface read smooth in raking light?
 - Do all four corners look identical and do the pleats/gathers all point the same direction?
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Checklist: Drum-Tight Pull Checklist

- Cover centered with center mark and any pattern aligned
- First four staples set: back-center, front-center, both side-centers
- Pulls worked outward to corners, alternating opposite sides at even tension
- Surface checked in raking light and felt smooth by hand
- Corners dressed identically, folds/gathers all one direction, bulk trimmed underneath
- Drop-in seat test-fit into the frame before final underside trimming

Tufting and Finishing Projects

Pull a basic button diamond, finish edges with welt or gimp, and complete a seat and an ottoman start to finish.

Worksheet: Button Tufting Layout Planner

Plan the button grid before you cut the cover. Set an even spacing, mark matching points on the base and the cover back, and add extra cover fabric for the fabric each button consumes (about an extra inch per button-to-button span). Use the tufting template to lay out and track each button.

Top area size (width x length, in)

Button spacing (in, center to center)

Number of buttons in the pattern

Extra fabric added for pleats (in per span)

Cover cut size with tufting allowance (width x length, in)

Pleat direction (down) and pull depth target

Exercise: Pull a Four-Button Diamond Sample

On a small covered board with foam and webbing, mark four button points in a diamond and pull each button down with twine through foam and webbing, tying off underneath over a webbing tab. Fold the slack between buttons into pleats pointing one direction, dressing each with a regulator before tightening the neighbors.

- Did every button pull to the same depth, and how did you keep the tie-off from pulling back through the webbing?

- Do all the pleats point the same direction and lie crisp, or did any wrinkle randomly?

- What would you change about your spacing or fabric allowance on the full ottoman top?

Checklist: Project Completion Checklist (Seat + Ottoman)

- Dining seat stripped, re-webbed if needed, foam glued oversize and Dacron-wrapped
- Seat cover pulled drum-tight, corners gathered evenly, underside trimmed, seat re-fitted to chair
- Ottoman top built, button grid marked, buttons pulled to even depth with pleats one direction
- Boxing (side panel) cut, wrapped, and fastened square
- Edges finished with welt or gimp, staple lines hidden, trim spacing consistent
- Both pieces photographed in good light with notes on what to improve next time

Your Action Plan

1. Assemble the starter kit: webbing stretcher, staple gun with three staple lengths, tack lifter, magnetic tack hammer, fabric shears, regulator, and curved needle.
2. Pick a first project that has no springs (a drop-in dining seat) and source foam, Dacron, webbing, and a plain fabric over 15,000 double rubs.
3. Measure the piece, build a cutting list, and calculate yardage on a 54-inch width; order all matching pieces from one dye lot.
4. Strip the seat methodically, photographing layers and labeling every panel as a pattern with its top edge and nap.
5. Assess and repair the bare frame: re-glue loose joints and fill stripped tack holes before rebuilding.
6. Re-web the seat drum-tight with the stretcher, weaving the second direction over and under, and test firmness with a fist push.
7. Cut foam about 1/2 inch oversize, glue it down, wrap with Dacron, and dry-fit the cover before stapling.
8. Pull the cover tight with the back-center, front-center, sides sequence, then dress every corner the same way.
9. Practice a four-button diamond on a scrap board, then tuft and box an ottoman top, dressing all pleats one direction.
10. Finish edges with welt or gimp, photograph both completed pieces, and log what to improve

before the next project.

