

# Pattern Design & Surface Design — Workbook

This workbook turns the course into a finished, sellable pattern collection. You will lock a concept, draw a motif library, build seamless repeats in real structures, develop colorways and coordinates, and prepare print-ready files with mockups. Work through one section per module and keep every file you make as part of a portfolio you can pitch.

## Foundations of Surface Pattern Design

Choose a concept, build a focused mood board, and draw an isolated motif library you can reuse across the whole collection.

### Exercise: Concept Lock and Market Target

Commit to a single collection concept and the product market it serves before drawing anything. Write your answers in full sentences so a stranger could understand the direction.

- Describe your collection concept in one specific phrase, for example sun-bleached 1970s citrus or coastal winter botanicals.

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- Name the primary product market (quilting cotton, peel-and-stick wallpaper, gift wrap, apparel, or device wallpapers) and one physical constraint it imposes.

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- List three references you admire and label each one for scale, density, and direction in your own words.

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- State the mood in three adjectives that every later color and motif choice must satisfy.

### Worksheet: Motif Library Planner

Plan a balanced motif set before drawing. Aim for roughly 3 hero, 5 to 6 supporting, and 4 to 6 filler motifs, each isolated on its own layer or named group with a transparent background.

Hero motif 1 — description and approximate drawn size

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Hero motif 2 — description and approximate drawn size

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Hero motif 3 — description and approximate drawn size

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Supporting motifs — list of 5 to 6 with one-line descriptions

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Filler motifs — list of 4 to 6 (dots, seeds, sprigs, dashes)

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Tool and file format chosen (Procreate raster, Illustrator vector, or hybrid)

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Layer or group naming convention used

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## Checklist: Mood Board and Motif Readiness

- Mood board has 15 to 25 references covering color, subject, era, and texture
- Board stays on one tight concept, not five competing ideas
- Every motif is drawn on its own layer or named group
- Every motif has a transparent (not white) background
- Motif set includes hero, supporting, and filler scales
- A layered master file is saved and named clearly

## Repeat Structures and Seamless Construction

Engineer a genuinely seamless tile, rebuild it as a half-drop or brick repeat, and confirm it tiles without grids or tram-lines.

### Exercise: Offset Method Seam Repair

Build one block repeat using the offset (cut-and-shuffle) method, then document what you fixed. Use Filter, Other, Offset in Photoshop with Wrap Around, or the equivalent nudge in your tool.

- Record your artboard size in pixels and the exact offset values you used (half width and half height).
- Describe the seam problems you found at the center after offsetting and how you repaired them.
- After tiling a large preview, note any visible grid lines or diagonal tram-lines and what you changed to remove them.
- Explain in one sentence why placing motifs across the outer edges after the final offset would break the repeat.

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## Worksheet: Repeat Structure Decision Sheet

Decide and record the repeat structure for each pattern in your collection. In Illustrator use Object, Pattern, Make and set the Tile Type and Brick Offset accordingly.

Pattern name

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Repeat structure chosen (block, half-drop, brick by row, brick by column, rotational, mirror)

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Tile Type and Brick Offset settings used

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Tile dimensions in pixels and target physical size in inches

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Rotation or scatter steps applied to break the grid

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Vector, raster, or hybrid path

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## Checklist: Seamless Tile Quality Gate

- Tile defined as a swatch or pattern and tested on a much larger canvas
- No visible grid where tile edges meet
- No diagonal tram-lines pulling the eye across the surface
- Coverage reads as even at thumbnail size when squinting
- Motifs kept on separate layers or named groups (non-destructive)
- Layered master saved before any flattening

## Exercise: Half-Drop Conversion Drill

Take one finished block repeat and rebuild it as a half-drop to disguise the grid. Compare the two side by side.

- Describe how the diagonal spread of motifs changed when you shifted alternate columns down by half.

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- Note which gaps the half-drop filled automatically and which you still had to fill by hand.

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- State whether the half-drop or the block version reads as more even, and why.

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## Color, Collections, and Coordinates

Set a disciplined limited palette, produce distinct colorways, and extend the hero print into a cohesive collection of coordinates.

### Worksheet: Limited Palette Builder

Define a palette of 4 to 8 colors plus the ground, assign each a role, and verify value contrast in grayscale.

Save it as a global swatch group or Procreate palette and use it exclusively.

Ground color — name and hex or Pantone code

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Dominant color 1 — name and code

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Dominant color 2 — name and code

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Secondary colors — list with codes

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Accent color (under 10 percent of surface) — name and code

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Grayscale value check result (does the palette still read?)

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Saved palette or swatch group file name

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### Exercise: Colorway Development

Create at least three colorways of your hero print using global swatches so one edit recolors every instance.

Aim for distinct moods, not random recolors.

- Describe the mood of each colorway, for example original, light or neutral, dark or moody, and seasonal.

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- Confirm you kept the value structure consistent so the pattern still reads in every colorway.

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- Note which colorway you expect to be the strongest seller and why.

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### Worksheet: Collection Build Sheet

Plan a six-piece collection that shares one palette and theme: one hero, two medium coordinates, and three

blenders or geometrics. Build coordinates by recombining existing motifs and palette colors.

Hero print — name and scale

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Secondary print — sub-motif used and scale

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Blender 1 — element reused (dots, dashes, speckle) and density

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Blender 2 — element reused and density

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Geometric — type (stripe, gingham, plaid, grid) and palette bands

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Shared palette name

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Scale range across the collection (largest to smallest)

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### Checklist: Collection Cohesion and Spot-Color Check

- All six pieces share one palette and one theme
- Scales range from large hero down to tiny blender
- Collection viewed as thumbnails together and reads as a family
- At least one full-color repeat rebuilt in exactly 6 flat colors as practice
- Each spot color named with a Pantone reference where production needs it
- No single piece jumps out with a stray color or wrong scale

## Production, Mockups, and Selling Your Work

Export technically correct files, present the collection on realistic product mockups, and choose a route to market with your rights protected.

### Worksheet: Print-Ready File Specification

Record the exact technical specs for each deliverable and match them to the target market before exporting. Quote resolution and physical size together. Target market and its published requirements

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Resolution in DPI (150 for Spoonflower fabric, 300 for fine paper goods)

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Repeat size in inches and equivalent pixel dimensions

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Color mode (RGB for digital and most print-on-demand, CMYK for offset paper)

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File format (PNG or TIFF raster, layered AI or PDF vector)

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Flattened preview JPG included alongside editable master (yes or no)

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Sample or swatch ordered to confirm color and scale (yes or no)

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### Exercise: Mockup and Scale Test

Place your hero print on at least one small product and one large product using a smart-object template or marketplace preview, then judge the scale honestly.

- Describe how the print looked on a small item (such as a zip pouch) versus a large item (such as a curtain panel).

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- State whether the motifs felt cramped, lost, or correct, and what scale change you made.
  - Note which product best showcases this design and why.
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### Worksheet: Route-to-Market and Pricing Plan

Compare the ways to earn from your collection and commit to a first move. Capture the key contract terms you will accept or reject.

Chosen first channel (print-on-demand, licensing, outright sale, own products)

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Expected return (commission percent, royalty percent, or flat fee range)

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Exclusive or non-exclusive terms acceptable

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Territory and term length limits

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Buyout clause stance (accept, negotiate, or refuse)

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Copyright protection steps taken (dated files, registration, copyright line)

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### Checklist: Launch Readiness

- Every pattern verified to tile correctly one final time
- DPI, dimensions, and color mode confirmed in document settings
- Exported files reopened fresh to catch surprises
- Pitch sheet shows hero, coordinates, palette, and 2 to 3 mockups
- Collection uploaded to at least one print-on-demand platform
- Layered masters and motif library archived as core assets

### Your Action Plan

1. Lock one collection concept and its target product market in a single written brief.
2. Build a tight 15 to 25 reference mood board and draw an isolated motif library (hero, supporting, filler).
3. Construct one flawless seamless tile using the offset method and verify it tiles cleanly.
4. Rebuild the hero as a half-drop or brick repeat in Illustrator Pattern Options to disguise the grid.
5. Define a limited palette of 4 to 8 colors as global swatches and check it in grayscale.
6. Produce at least three distinct colorways of the hero print.
7. Extend the hero into a six-piece collection of two coordinates and three blenders or geometrics.
8. Reduce one design to exactly 6 flat spot colors with Pantone references as a production drill.
9. Export print-ready files matched to your target market's DPI, size, and color mode.
10. Create realistic product mockups, assemble a pitch sheet, and upload the collection to a print-on-demand platform.









