

Adobe Illustrator for Beginners

Complete Course Notes — From Shapes and Paths to Export and Print

SECTION 1: Workspace Setup and Navigation

1.1 Setting Up Your Workspace

Before starting any project, it is important to ensure your Illustrator workspace is configured correctly. This helps you follow along consistently and avoid confusion when menus appear in unexpected places.

- Reset workspace: click the workspace menu in the top app bar → select Essentials → then click Reset Essentials
- Older versions of Illustrator (CS5/CS6) may not have the Properties panel — access character, appearance, and other panels via Window menu instead
- Set units and increments: with nothing selected (click the grey background area with the Selection tool), the Properties panel shows general document settings including units
- Change units: click the unit's dropdown → choose Inches (for print), Pixels (for web/UI design), or your preferred unit
- The Properties panel dynamically changes based on what is selected — with nothing selected it shows document-level settings

1.2 Essential Navigation Shortcuts

Action	Shortcut
Zoom In	Command + Plus (Mac) / Ctrl + Plus (PC)
Zoom Out	Command + Minus (Mac) / Ctrl + Minus (PC)
Fit Artboard to Window	Command + 0 (Mac) / Ctrl + 0 (PC)
Pan / Move around canvas	Hold Spacebar → click and drag (Hand tool)
Undo	Command + Z (Mac) / Ctrl + Z (PC)
Redo	Shift + Command + Z (Mac) / Shift + Ctrl + Z (PC)
Toggle Outline View	Command + Y (Mac) / Ctrl + Y (PC)
Toggle Smart Guides	Command + U (Mac) / Ctrl + U (PC)
Select All	Command + A (Mac) / Ctrl + A (PC)
Deselect All	Click on empty grey canvas area with Black Arrow

1.3 Creating a New Document

Go to File → New to open the New Document dialog. Key settings to configure:

- Profile tabs at the top: Print (inches, CMYK), Web/Mobile (pixels, RGB) — choose based on your intended output
- Size presets: Letter (US standard), A4 (international), or custom dimensions
- Orientation: Portrait or Landscape
- Color Mode: under Advanced Options → RGB is recommended for most purposes. RGB gives richer, more vibrant colors. CMYK is used for commercial print but is more limited. Modern printers can convert from RGB, often with better results.
- Click Create to make your new document

1.4 Saving Your File

- File → Save As (Command + Shift + S / Ctrl + Shift + S)
- Name convention tip: never save as 'Final' — use version numbers like v1, v2, v3 or include the date
- Save in .ai format (native Illustrator format) — this keeps all layers, paths, and editability intact
- Illustrator file options on save: leave defaults and click OK
- Create organized folders — keep all project files, exercise files, and exports in clearly named folders

SECTION 2: Shapes — Rectangles, Ellipses, Polygons, and Stars

2.1 The Rectangle and Ellipse Tools

The Rectangle and Ellipse tools are the foundation of vector illustration. Click and drag to draw; hold Shift to constrain proportions (perfect square or perfect circle).

Tool / Technique	What It Does
Rectangle tool (M)	Draws rectangles. Click and drag freely; Shift constrains to perfect square
Ellipse tool (L)	Draws ellipses and circles. Hold Shift to draw a perfect circle
Click once (any shape tool)	Opens a dialog box to enter exact dimensions before drawing
Hold Shift while resizing	Locks width and height ratio — resizes proportionally without distortion
Keyboard arrow keys	Fine-tune position of selected object by nudging it pixel by pixel
Corner Options (round circle targets)	Appear when object is selected — drag toward center to round all corners. Click once on one target to select it individually, then drag to affect only that corner. Hold Shift to select multiple corners.

2.2 Fill and Stroke

Fill is the color that fills the interior of a shape. Stroke is the line or border around the outside of a shape.

- Click the Fill swatch in the Properties panel or toolbar to open color options
- Click the red diagonal line (None icon) to remove fill or stroke — use this when you want a shape with no fill (transparent interior) or no border
- Stroke weight: change the thickness using the Stroke value field in the Properties panel (e.g. 1pt = thin line, 4pt = thick)
- With no fill, an object can only be selected by clicking its edge/outline — clicking the center will miss it
- Stroke caps (found in the Stroke panel — click the word 'Stroke' for full options):
 - Butt Cap — flat ends that stop exactly at the anchor point
 - Round Cap — circular ends that extend slightly past the anchor point; great for softening line endings
 - Projecting Cap — square ends that extend past the anchor point, similar to Butt but longer
- Stroke corners: Miter (sharp), Round, or Bevel — change how corners look where two strokes meet

2.3 The Polygon and Star Tools

- Access both by clicking and holding the Rectangle tool in the toolbar
- Polygon tool: click once on the canvas to open the Polygon dialog — set the number of sides (3 = triangle, 5 = pentagon, 6 = hexagon)
- Star tool: click and drag to draw a star. Click once to open the dialog — adjust Number of Points and the two Radius values to control how pointed or stubby the star is
- Hold Shift while rotating any shape to lock rotation to 45-degree increments
- Rotating objects: with the Black Arrow, move your cursor just outside a corner handle until you see the bent rotation arrow — then click and drag to rotate

2.4 The Arc Tool

- Click and hold the Line Segment tool in the toolbar → select the Arc tool
- Click and drag to draw a curved arc — the direction of drag determines the arc shape
- Rotate the arc using the rotation zone (just outside the corner handles) to position it correctly
- Change stroke weight and cap style for arcs the same way as other strokes

2.5 Working with Layers

Illustrator uses a Layers panel to organize artwork. Understanding layers is essential for complex illustrations.

- Layers panel: View → Window → Layers (if not visible)
- Lock a layer: click the padlock icon next to a layer — prevents accidentally moving or editing objects on that layer
- Hide a layer: click the eye icon to toggle visibility
- Rename a layer: double-click the layer name
- Move an object to a different layer: select the object → drag the small colored square (Layer Indicator dot) from one layer row to another in the Layers panel
- Template layer: when placing an image (File → Place) with the Template checkbox ticked, Illustrator automatically creates a locked, dimmed layer — perfect for tracing over a sketch or reference image
- Smart Guides (View → Smart Guides): magenta alignment guides appear automatically when moving or drawing — helps snap to edges, centers, and intersections. Turn off if they become distracting.

2.6 Grouping and Arranging

- Group: select multiple objects → Object → Group (Command/Ctrl + G) — they now move and scale together as one unit
- Ungroup: Object → Ungroup (Shift + Command/Ctrl + G)
- Arrange (layer order): Object → Arrange → Bring to Front / Send to Back / Bring Forward / Send Backward
- In Illustrator, unlike Photoshop, most work happens on a single layer — objects are arranged using the Arrange menu rather than managing many layers
- Isolation Mode: double-clicking a grouped object enters Isolation Mode — everything outside the group is greyed out. You can edit individual objects within the group without ungrouping. Exit by clicking the arrow in the grey bar at the top, or double-click the background.
- Selecting multiple objects: click one → hold Shift → click others. Or drag a selection box around them with the Black Arrow.
- Scale strokes and effects: with nothing selected, a checkbox appears in the Properties panel. When ON, strokes scale proportionally when you resize; when OFF, stroke weight stays fixed regardless of scale.
- Eyedropper tool (I): click one object to select it, switch to Eyedropper, then click another object to copy its fill and stroke settings onto the first — fast way to match styles

SECTION 3: The Shape Builder Tool

3.1 What is the Shape Builder Tool?

The Shape Builder tool (Shift + M) is one of Illustrator's most powerful and versatile tools. It allows you to combine, subtract, and color overlapping shapes quickly and intuitively — replacing the more complex Pathfinder panel for most common tasks.

3.2 Three Ways to Use Shape Builder

Action	How to Do It
Join / Combine shapes	Select all overlapping shapes with Black Arrow. Switch to Shape Builder (Shift+M). Click and drag across multiple shapes to merge them into one.
Delete / Remove a section	Select all shapes. Switch to Shape Builder. Hold Option (Mac) or Alt (PC) — cursor shows a minus sign. Click or drag across the section you want to delete.
Color individual sections	Select all shapes. Switch to Shape Builder. Set a fill color in the Properties panel. Click on any individual intersection or region to fill just that area — without needing to split shapes first.

3.3 Practical Uses

- Creating shadows on illustrations: draw a line across an object to divide it → select both the line and the shape → use Shape Builder to color each section differently
- Creating reflections/highlights: overlap shapes where you want a highlight, divide using a line, delete unwanted sections with Option/Alt + click
- Creating custom icons and logos from lines: draw letter shapes using the Line Segment tool → select all → use Shape Builder to join and delete sections to create clean letterforms
- Cutting holes: draw a circle over an existing shape → select both → hold Option/Alt → click the circle to cut it out, creating a hole through the underlying shape
- Casting shadows: duplicate a shape, offset it, overlap both, select both → use Shape Builder to fill the overlapping area with a shadow color
- After joining with Shape Builder, use the White Arrow (Direct Selection) to drag individual corner radius targets and add curves to sharp angles within the combined shape

3.4 Important Keyboard Shortcuts

Tool / Action	Shortcut
Selection tool (Black Arrow)	V
Direct Selection tool (White Arrow)	A
Shape Builder tool	Shift + M
Pen tool	P
Type tool	T
Eyedropper	I
Zoom tool	Z
Undo	Command/Ctrl + Z
Group	Command/Ctrl + G
Ungroup	Shift + Command/Ctrl + G
Show/hide Smart Guides	Command/Ctrl + U
Outline / Preview view	Command/Ctrl + Y (toggle)
Duplicate by dragging	Hold Option (Mac) / Alt (PC) while dragging

SECTION 4: Drawing Custom Paths — Curvature Tool and Pen Tool

4.1 The Curvature Tool

The Curvature tool is a newer, simplified alternative to the Pen tool. It is ideal for beginners learning to draw smooth, organic curves. Illustrator automatically smooths the path between clicks, guessing the best curve shape.

- Single-click to place a smooth curve anchor point
- Double-click to place a sharp corner anchor point (straight line direction change)
- Click to close the path — when returning to the starting point, just click once (do not double-click) to close
- After placing points, you can click and drag any anchor point to reposition it and adjust the curve
- Add a new anchor point: hover over the path until a plus (+) symbol appears next to the cursor → click to add
- Delete an anchor point: click to select it → press Delete on keyboard
- Pro tip: fewer anchor points = smoother, cleaner curves. Only add extra anchor points where you truly need more control.
- Smart Guides can interfere with the Curvature tool — consider turning them off (View → Smart Guides) while drawing

4.2 Curvature Tool — Curves vs Corners Reference

Path Element	Click Action
Smooth curve point	Single click — Illustrator automatically creates a smooth transition
Sharp corner point	Double click — creates a corner with no smooth curve transition
Closing the path	Single click on the starting point — the cursor shows a circle icon when you can close
Converting corner ↔ curve	Double-click an existing anchor point to toggle between corner and smooth
Moving an anchor point	Click and drag with the Curvature tool active
Stopping without closing	Press Escape to finish an open path

4.3 The Pen Tool

The Pen tool (P) gives the most precise control over paths and anchor point handles. It is the industry-standard drawing tool used across Illustrator, Photoshop, InDesign, After Effects, and many other programs. Once mastered in one application, it transfers to all others.

- Single-click to place straight corner anchor points — the Pen tool defaults to straight lines (opposite of Curvature tool)
- Click and drag to place a smooth curve anchor point — the direction and distance of the drag determine the curve's arc and intensity
- Handle direction: drag in the direction you want the path to continue — dragging up makes the curve go up
- To finish a curve with a corner (prevent the curve continuing from that anchor point): hold Option/Alt and click the last anchor point once to remove the forward handle
- Caps Lock on keyboard toggles the cursor between the fountain pen icon and a precise crosshair — both works identically
- Add anchor point: hover over a path segment until a + appears → click to add
- Delete anchor point: hover over an existing anchor point until a - appears → click to remove
- Convert anchor point tool: click and hold the Pen tool → select the Anchor Point tool → click an anchor point to convert it between corner and smooth
- After drawing a path, use the White Arrow (Direct Selection) to select individual anchor points and drag their handles to fine-tune curves

4.4 Curvature Tool vs Pen Tool Comparison

Feature	Curvature Tool
Learning curve	Easy — great for beginners
Default click behavior	Creates smooth curves automatically
Curve control	Illustrator smooths curves automatically
Portability to other apps	Unique to Illustrator
Ideal for	Organic shapes, flowing icons, botanical forms
When to use both	Use Curvature tool for initial rough shape; switch to White Arrow for fine handle adjustments

SECTION 5: The Pencil Tool and Advanced Stroke Options

5.1 The Pencil Tool

The Pencil tool creates freehand paths by tracking your mouse or stylus movement. It is best used for organic, hand-drawn style illustration. Raw pencil drawing with a mouse tends to be wobbly, but Illustrator provides smoothing to clean up the result.

- Find it: click and hold the Shaper tool in the toolbar → select Pencil tool
- Set smoothing: double-click the Pencil tool to open options → adjust the Fidelity slider toward 'Smooth' to have Illustrator automatically simplify and smooth your lines
- Turn off 'Keep Selected': in the Pencil tool options, turn off 'Keep Selected' — this prevents Illustrator from trying to reconnect new lines to existing ones, which can cause accidental redraws
- Draw freely — the smoother the fidelity setting, the more Illustrator averages out your shaky mouse movements into clean flowing curves
- Use with a Wacom stylus or drawing tablet for best results; freehand mouse drawing is always harder

5.2 Advanced Stroke Options

Stroke Feature	Where to Find It / How to Use It
Stroke weight	Properties panel → Stroke field. Use up/down arrows or type a value directly.
Stroke cap style	Click the word 'Stroke' in Properties panel → Butt (flat), Round (circular), or Projecting (extended square) cap
Stroke corner style	In the Stroke panel → Miter Join (sharp point), Round Join (rounded), Bevel Join (cut flat)
Stroke profile	Stroke panel → Profile dropdown → choose a variable-width profile (e.g. calligraphic taper, thick-thin) for artistic strokes
Arrowheads	Stroke panel → Arrowheads section → choose arrow style for the start and/or end of a path. Adjust scale percentage to control arrowhead size relative to stroke weight.
Dashed lines	Stroke panel → tick 'Dashed Line' checkbox → enter dash length and gap values (e.g. Dash: 12pt, Gap: 12pt)
Dotted lines	Tick 'Dashed Line' → set Dash to 0 (zero) → set Gap to your desired spacing → set Cap to Round. The zero-width dashes become perfect dots with Round caps.

SECTION 6: Brushes in Adobe Illustrator

6.1 What Are Brushes?

Brushes transform plain strokes into artistic, textured, hand-drawn, or decorative lines. Any stroke — whether drawn with the Pencil, Pen, Curvature, or Line Segment tool, or applied as a stroke around a shape — can have a brush applied to it.

- Access brushes: Window → Brush Libraries → choose a category
- Best brush libraries: Vector Packs → Grunge Brushes Vector Pack (texture, distressed look) and Hand-Drawn (organic, sketch-like feel)
- Other good libraries: Artistic → Chalk Charcoal Pencil and Artistic → Ink
- Apply a brush: select the stroked object with the Black Arrow → click a brush in the Brush Library panel
- Adjust brush stroke size: after applying, change the Stroke weight in the Properties panel. You can type in very small values like 0.05 if the default is too large.

6.2 Types of Brushes

Brush Type	How It Works / Best For
Calligraphic brushes	Simulate calligraphy pens — vary stroke width based on direction. Good for lettering and flowing lines.
Scatter brushes	Scatter copies of an art object along a path — e.g. stars, leaves, dots distributed along a curve.
Art brushes (Vector Pack Grunge, Hand-Drawn)	Stretch a texture or hand-drawn mark along the entire length of a stroke. Best for single, expressive lines.
Pattern brushes	Repeat a tile pattern along the stroke — good for borders, frames, and decorative edges.
Ink brushes (transparent)	Semi-transparent ink strokes — where two strokes overlap, the colour deepens, creating a realistic ink buildup effect.
Drag-and-drop brushes (from Ink library top section)	Some brushes are designed to be dragged directly onto the artboard as standalone artistic marks — not applied to existing strokes. Ungroup them to isolate individual marks.

6.3 Using Brushes with Pencil Lines

- Draw with the Pencil tool first → select all strokes → then click a brush to apply
- Drawing individual short strokes and applying brushes gives a richer, more varied result than one long continuous stroke (which stretches the brush texture uniformly)
- After applying a brush: ungroup the object if you want to manipulate parts (Object → Ungroup, repeated multiple times for deeply nested groups)
- Creating artistic effects: combine the Pencil tool with brush profiles (the Profile dropdown) and brush libraries to create hand-drawn illustration styles

SECTION 7: Color in Adobe Illustrator

7.1 Color Basics — Swatches, Colour Mixer, and Modes

- Swatches panel: pre-made color collections. Illustrator includes default swatches. Click any swatch to apply to selected object's fill or stroke.
- Color Mixer: click the palette icon in the fill/stroke options → click and drag the rainbow spectrum bar at the bottom to pick any color
- Create custom swatch: mix a color → click the New Swatch icon in the Swatches panel → name it → it saves for the current document
- Document color mode: File → Document Color Mode → RGB (for screen/web) or CMYK (for commercial print). RGB provides a larger, richer color gamut.
- Hexadecimal colors: type a hex code directly into the color field (e.g. #3498DB) — useful for matching specific brand colors or web colors

7.2 RGB vs HSB — A Practical Comparison

Both RGB and HSB describe the same colors — they are just different ways to express the same colour information. HSB is generally more intuitive for making adjustments.

Model	Stands For
RGB	Red, Green, Blue
HSB	Hue, Saturation, Brightness
CMYK	Cyan, Magenta, Yellow, Key (Black)

- To switch between RGB and HSB: click the small palette icon in the color panel → choose HSB or RGB from the dropdown

7.3 Adobe Color Themes

- Window → Color Themes → opens the Adobe Color Themes panel
- Click Explore tab (not Create) to browse popular, curated color palettes from the Adobe Color community
- Filter by Most Popular / This Week / This Month
- Search by keyword: type 'retro', '80s', 'cafe', 'ocean', 'earth tones' — returns thematically matched palettes
- Add to swatches: click a theme → Add to My Swatches — the colors are instantly available in your Swatches panel
- Web alternative: visit color.adobe.com for the full browser-based interface with larger previews and more exploration options

7.4 Gradients

Gradients transition smoothly from one color to another. They are applied as a fill to any shape.

- Apply a gradient: select a shape → click Fill → click the gradient icon (black/white square) → a default gradient applies
- Open Gradient panel: Window → Gradient (or click 'Gradient options' in the Properties panel)
- Gradient types: Linear (straight line transition) or Radial (circular, from center outward)
- Change gradient colors: double-click either the house-shaped color stop below the gradient slider → pick a new color from swatches or color mixer
- Add a middle color stop: click anywhere in the empty space between the two existing stops — a new stop appears → double-click to set its color
- Remove a color stop: click it to select → drag it downward off the slider until it disappears
- Gradient tool (G): click on a shape and drag to reposition the gradient direction and length interactively. Short drag = concentrated transition; long drag = gradual transition.
- Invert gradient: click the reverse arrow button in the Gradient panel to flip the direction of colors
- Gradient inspiration: visit gradient.com for curated beautiful gradients with hex codes — copy and paste the hex codes directly into Illustrator's color stops

SECTION 8: Type, Fonts, and Typography

8.1 Creating Type in Illustrator

Illustrator offers two types of text boxes, each suited for different purposes:

Text Box Type	How to Create
Point Type	Click once with the Type tool — text flows indefinitely in one direction
Area Type	Click and drag to define a rectangular box — text wraps automatically at the box edges

8.2 Key Typography Settings

Setting	Where Found / What It Does
Font family	Properties panel → Character section → Font name field. Type to search, or use filter icons to browse by classification (Serif, Sans-Serif, Script, Display, etc.)
Font size	Properties panel → Character section → size field. Or use Black Arrow + Shift-drag a corner to resize the text visually.
Leading (line spacing)	Character panel → the icon showing stacked lines with an up/down arrow — controls vertical space between lines
Tracking (letter spacing)	Character panel → controls overall spacing between all characters in a selection
Kerning	Places cursor between two characters → adjust kerning to change space between just those two characters
All Caps, Subscript, etc.	Click the three dots (...) at the bottom of the Character section for advanced options: All Caps, Small Caps, Superscript, Subscript, Baseline Shift
Paragraph alignment	Properties panel → Paragraph section → Left, Centre, Right, or Justify
Fill color of text	Select text with Black Arrow → change Fill colour as normal
Lorem Ipsum placeholder text	When editing an empty text box, Illustrator can fill it with Latin dummy text — useful for layout design before real copy is available

8.3 Font Filtering

- In the Font dropdown, use the filter icons to narrow down by font classification:
 - Serif — fonts with small feet/serifs on letterforms (e.g. Times New Roman, Garamond)
 - Sans-Serif — clean fonts without serifs (e.g. Helvetica, Arial)
 - Script — handwriting/cursive style fonts
 - Monospaced — each character takes the same width (e.g. Courier — good for code)
- Use the Recommended filter to see fonts suggested for heading or body copy use
- Type sample text in the preview field to see how your actual words look in each font before applying

8.4 Adobe Fonts (formerly Typekit)

Adobe Fonts gives access to thousands of professional fonts included with any Creative Cloud subscription — at no extra cost.

- In the Font dropdown → click 'Add Fonts from Adobe Fonts' → opens a web browser
- On the Adobe Fonts website: search by keyword (e.g. 'League Gothic') or browse by classification, weight, width, and recommended use
- Click 'Activate' (previously 'Sync All') next to a font family — it downloads automatically to your computer
- The font appears in Illustrator almost immediately — type its name in the font search field
- Fonts activated through Adobe Fonts are available in ALL Adobe applications (Illustrator, Photoshop, InDesign, etc.)

8.5 Creating Outlines from Text

Converting text to outlines turns editable text into vector shapes. This is required before using Liquify tools, Shape Builder, or for creating patterns from type.

- Select text with Black Arrow → Type → Create Outlines
- The text becomes vector shapes — it can no longer be edited as text, the font will no longer be embedded, and Illustrator will not recognize which font was used
- Best practice: copy and paste the original text somewhere off the artboard before creating outlines — keep an editable backup for future reference
- After creating outlines, the text is grouped by default — double-click to enter Isolation Mode and access individual letter shapes

SECTION 9: Effects — Liquify Tools and Envelope Distort

9.1 Liquify Tools

Liquify tools interactively distort and warp paths and shapes. They work on any vector object — shapes, outlines, text that has been converted to outlines, and grouped artwork.

- All Liquify tools are stacked under the Width tool in the toolbar — click and hold to reveal the full set
- Adjust brush size and intensity: double-click any Liquify tool to open its options → set Width, Height (brush size), and Intensity
- Objects do not need to be selected to use Liquify tools — you can click directly on them. Deselecting first avoids seeing distracting blue anchor points.

Liquify Tool	What It Does
Warp (Forward Warp)	Pushes and drags the path in the direction you drag — creates melting, drippy, flowing effects. Ideal for stylized text.
Twirl	Spins anchor points around the brush center — creates spiral/twirl effects. Click and hold to twirl on the spot; drag to move the twirl across the path.
Pucker	Pulls anchor points inward toward the brush center — creates pinched, collapsed shapes.
Bloat	Pushes anchor points outward away from the brush center — creates inflated, bulging shapes.
Scallop	Creates arc-like indentations along the edge of a path — scalloped border effect.
Crystallize	Creates spiky outward points along the edge of a path.
Wrinkle	Creates a combination of inward and outward distortions along the path edge — crinkled, textured edge.

9.2 Envelope Distort (Warp Effect)

Envelope Distort applies a pre-defined warp shape to any group of objects. Unlike Liquify, the warp effect remains 'live' and editable after application — you can change the type and intensity at any time.

- Apply: select grouped objects → Effect → Warp → choose a preset (Arc, Bulge, Flag, Fish, Wave, etc.)
- Always turn on Preview in the dialog to see the effect before applying
- Bend: controls the strength of the warp effect (positive or negative)
- Horizontal/Vertical Distortion: additional controls to skew and exaggerate the warp in one direction
- Edit after applying: the effect appears in the Appearance panel → click it to reopen the settings and modify
- Works with type: apply Envelope Distort directly to text — the text remains editable (double-click to change wording)
- Expand the effect: Object → Expand Appearance — converts the live effect to fixed vector paths. Required if you want to rotate the warped object freely or use Liquify tools on it. Cannot be undone after document is closed.
- Use case: creating wave-shaped text, arc banners, flag-style layouts, ripple backgrounds from repeated shapes

SECTION 10: Creating Repeating Patterns

10.1 Making a Pattern

Illustrator can turn any artwork into a seamlessly repeating pattern tile that can be applied as a fill to any shape — perfect for backgrounds, fabric printing, wallpaper, gift wrap, and brand assets.

- Step 1: create or select the artwork that will form the pattern tile
- Step 2: group the artwork (Object → Group) — especially if it is made of multiple parts
- Step 3: consider the tile size carefully now — it is difficult to adjust the pattern tile size after creation. Resize the artwork to the approximate size you want the repeat to be before proceeding.
- Step 4: Window → Pattern Options to open the Pattern Options panel
- Step 5: click the hamburger menu (≡) in the Pattern Options panel → click Make Pattern
- Step 6: you are now in pattern editing mode (grey bar appears at top). The originals appear solid; copies appear dimmed around them.

10.2 Pattern Options

Option	What It Controls
Tile Type	Grid (standard repeat), Brick by Row (alternating rows offset), Brick by Column, Hex by Row, Hex by Column — different geometric tiling arrangements. Experiment to find the most interesting layout.
Width / Height	Size of the tile (the repeating unit). Adjust to control how much spacing there is between elements.
Overlap	When tile elements overlap, determines which element appears in front
Copies (preview)	How many rows and columns of repeats show in the preview (3x3, 5x5, up to 9x9). The pattern always repeats infinitely when applied — this is just the preview.
Dimmed Copies	Toggle whether the surrounding repeat copies appear dimmed or full colour — dimming helps you see your original tile clearly
Show Tile Edge	Displays the boundary of the repeating tile unit

10.3 Finishing and Applying a Pattern

- When satisfied: click 'Done' in the grey bar at the top — the pattern is saved automatically to your Swatches panel as a small thumbnail
- Apply the pattern: draw any shape (e.g. a large rectangle) → click Fill → click the pattern swatch in the Swatches panel
- Resize the pattern independently of the object: Window → Transform panel → click the hamburger menu → select 'Transform Object Only' — now resizing the shape does not resize the pattern fill. Switch back to 'Transform Both' to resize both together.
- Edit the pattern: select the patterned shape → go to Fill → click the swatch → Window → Pattern Options → hamburger menu → Edit Pattern. Make changes → click Done.

10.4 Sharing Patterns Between Documents

- Patterns are stored in the Swatches panel for the current document only
- To transfer a pattern to another document: copy any shape that uses the pattern → paste it into the new document → the pattern appears in the new document's Swatches panel automatically
- Alternative long method: use the Swatch Library menu to save and load ASE (Adobe Swatch Exchange) files — useful for large teams or brand consistency across many files
- Real-world application: Spoonflower.com allows you to upload your Illustrator patterns and have them printed on fabric, wallpaper, and home goods — great for designers creating surface pattern designs

SECTION 11: Live Trace — Vectorizing Images

11.1 What is Live Trace?

Live Trace (officially called Image Trace) converts raster images (photographs, scans, hand-drawn sketches) into editable vector artwork. This allows you to scale the image to any size without quality loss, recolor individual areas, and edit the shapes.

- Works best on: high-contrast images, simple illustrations, photographs with distinct colour areas, hand-drawn sketches
- Works less well on: complex photographs with gradual tonal transitions, images with many similar colors

11.2 Applying Image Trace

- Place the image: File → Place → select your image file → click once to place at full size, or click and drag to set the size
- Select the placed image with the Black Arrow
- In the Properties panel: click Image Trace → choose a preset from the dropdown:

Preset	What It Creates
High Fidelity Photo	Detailed multi-color trace of a photograph — very many color regions
Low Fidelity Photo	Simplified multi-color trace — fewer, chunkier color areas
3 Colors	Traces the image using only 3 dominant colors — screen-print style effect
6 Colors	More detailed color trace using 6 colors
Shades of Grey	Greyscale trace using gradations of grey
Black and White Logo	Two-color trace: pure black and white — good for logos and stencils
Sketched Art	Preserves the look of pencil or ink sketches
Silhouettes	Creates a solid black silhouette from the main subject

- Fine-tuning: click 'Open the Trace panel' (or Window → Image Trace) to access detailed controls:
 - Colors slider: increase or decrease the number of color regions in the trace
 - Threshold (for black and white): drag left for less detail, right for more — controls which tones become black vs white
 - Preview: tick the Preview checkbox to see changes live before committing

11.3 Expanding and Editing the Trace

- After tracing: click Expand in the Properties panel (or Object → Expand) to convert the live trace into editable vector shapes
- After expanding, the artwork is grouped — use the White Arrow to click individual color regions and move or delete them
- Select all regions of one color: White Arrow → click one region of the target color → Select → Same → Fill Color — Illustrator selects all paths with that exact fill color throughout the document
- Change the selected color: click Fill → choose a new color — all selected regions update instantly
- Delete background areas: expand → White Arrow → click white/background area → Select → Same Fill Color → Delete

11.4 Creating a Stencil Effect

- In Photoshop: use Select → Subject to isolate the subject → create a mask to remove the background → save as a PSD file
- In Illustrator: File → Place the PSD → select it → Image Trace → Black and White Logo preset
- Adjust Threshold to control how much detail is captured
- Expand → delete the white fill areas (Select Same Fill Color → Delete)
- Result: a clean black stencil silhouette vector that can be scaled infinitely, recolored, and used as a design element

SECTION 12: Exporting — Print, Web, and Individual Assets

12.1 Exporting for Print — PDF

PDF is the professional standard format for print output. It retains vector quality, embeds fonts, and is accepted by all commercial printers.

- File → Save As → change format to PDF → navigate to your destination folder → Save
- In the PDF options: set Preset to 'High Quality Print'
- Critical setting: uncheck 'Preserve Illustrator Editing Capabilities' — this removes internal Illustrator metadata that the printer does not need
 - With this ON: file size can exceed 100 MB
 - With this OFF: file size typically under 1 MB — same visual quality for the printer
- Click Save PDF

12.2 Low Resolution PDF for Email / Web Download

- File → Save As → PDF format
- Set Preset to 'Smallest File Size'
- Uncheck 'Preserve Illustrator Editing Capabilities'
- Result: very small file size (under 100 KB for a single page) — suitable for emailing, downloading, or embedding on a website

12.3 Exporting JPEG

- File → Export → Export for Screens
- Choose the Artboards tab to export the full artboard
- Set format to JPEG
- Quality slider: use 100 for highest quality; reduce if file size is too large
- Click '+' to add a second export at a different scale — e.g. add a 0.5x version for comparison alongside the original
- Click Export Artboard

12.4 Exporting Individual Assets (Icons, Logos)

The Asset Export panel allows you to export individual objects, groups, or icons from a document without manually isolating each one.

- Window → Asset Export to open the Asset Export panel
- Drag individual objects (or groups) from the canvas into the Asset Export panel — click the edge if there is no fill
- Name each asset in the panel — this becomes the exported filename
- Select all assets in the panel (click one → Shift-click others)
- Choose format: PNG (supports transparency — ideal for icons on websites), SVG (vector format — scales perfectly at any size, increasingly used by web developers), or both
- Click '+' to add a second format (e.g. both PNG and SVG) — Illustrator will export both simultaneously
- Click Export — choose your destination folder
- Dynamic updates: if you change the color or appearance of an asset after adding it to the Asset Export panel, click Export again — the exported files update automatically with the new design

12.5 Format Comparison for Export

Format	Best For	Key Characteristic
PDF (High Quality)	Commercial print shops, professional printing	Vector quality preserved, small file size with 'Preserve Editing' off
PDF (Smallest File Size)	Email attachments, web downloads, client review	Very small file, still looks good on screen
JPEG	Blog images, social media, basic web use	No transparency support; white background added automatically
PNG	Website icons, logos, UI elements — anywhere transparency is needed	Supports transparent backgrounds; larger file than JPEG
SVG	Web icons, logos for developers, scalable UI assets	Vector-based; infinitely scalable; very small file size; increasingly the web standard

— End of Course Notes —