Image Editing: A Crash Course
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**Introduction**

Is every image in the world run through Photoshop?

**Image editing** is an interesting field. We create perfection and chaos, mold and shape, fix and destroy. And Adobe Photoshop is the industry standard for doing these things. Knowing the basics of Photoshop opens thousands of doors for you no matter what you end up doing; it’s always a great thing to put on a resume. But what exactly can you do with Photoshop? The possibilities are endless.
Your Friend Photoshop

The most commonly used keyboard and command shortcuts

- **Regular mouse/select tool:** V
- **Grab:** Hold space bar, click and drag
- **Eraser:** E
- **Brush:** B
- **Eyedropper:** I
- **Clone Stamp:** S
- **Lasso:** L (add to selection: Hold shift) (Subtract from selection: hold alt)
- **Healing Brush:** J
- **Burn/Dodge/Sponge:** O
- **Blur/Sharpen/Smudge:** R
- **Magic Wand:** W
- **Flip foreground/background color:** X
- **Rectangular/Circular Selection:** M
- **Paint Bucket/Gradient:** G
  
  **Grow/Shrink Brush Size:** [ and ]
  
  **Free Transform:** Ctrl T
  - Hold shift to keep proportions
  
  **Undo:** Ctrl Z
  
  **Redo:** Ctrl Shift Z
  
  **Cut:** Ctrl X
  
  **Copy:** Ctrl C
  
  **Paste:** Ctrl V
  
  **Save:** Ctrl S
  
  **Zoom In:** Ctrl +
  
  **Zoom Out:** Ctrl -
  
  **Zoom document to fit screen:** Ctrl 0
  
  **Show/Hide Guides:** Ctrl ;
  
  **Select All:** Ctrl A
  
  **Deselect:** Ctrl D
  
  **Select object on layer:** Ctrl Click image within Layers palette
  
  **Create straight lines between eraser/brush/selection/etc. tool:** Click to make first point with your tool, hold shift, then click to next point - a straight line will be drawn; keep holding shift to keep making straight lines as you go.

NOTE FOR MAC USERS - Replace all “Ctrl ___” commands with “⌘ ___”
Your Friend Photoshop

Almost all of these buttons can be held down for more tools

- Marquee tool
- Lasso tool (L)
- Clone stamp tool (S)
- Eraser tool (E)
- Blur/sharpen/smudge tool
- Pen tool
- Hand tool (hold space bar)
- Foreground color
- Direct select/regular mouse tool (A)
- Magic wand tool (W)
- Brush tool (B)
- Paint bucket tool
- Dodge/burn/sponge tool (O)
- Text tool (T)
- Eyedropper tool (I)
- Swap foreground/background color (X)
- Background color

Layer Palette

- Cut/paste
- Transform tool
- Save
- Import
- New/delete layer
- Adjustment layers
- Flatten image
- Extract
- Liquefy
- Artistic filters
- If you’re missing a toolbar or panel, find it here (History)
- Layer opacity
- Layer mode
- Toggle on/off
- Locked layer: double click to unlock
- New layer
- Delete layer

These are all of the basic image adjustments: Brightness/Contrast, Hue/Saturation, etc. Also find these for adjustment layers in the Layers menu.
Basic Photo Editing

We’ll start easy - making good images even better

**Brightness:** This picture already looks pretty good, but if only it wasn’t so gray! Go to the **Image** menu, then **Adjustments**, then **Brightness/Contrast**. Adjust the brightness!

**Contrast:** Ok, so we made the picture brighter (or darker, depending on the image), but we lost some of the nice shadows by making it so bright. Go to the same panel, except adjust contrast this time.

**Hue/Saturation:** So the highlights and shadows are standing out a lot more, but this picture is still very grey. Go to **Image, Adjustments**, then **Hue/Saturation**. I also went back and adjusted the brightness/contrast to work with my new bright colors.
Making Selections

Changing only part of a picture

**Magic Wand Tool:**
Look on your main tool bar for one icon that has a stick with sparks coming off of it. Your magic wand tool will select all pixels of a similar color. For this, I want to select the big white sky area.

We now have **marching ants** around the sky. But the wand tool selected part of the truck, and some buildings too. We’re going to use the **lasso tool**; hold down alt while drawing around what you don’t want to include.

**Hue/Saturation:** We’re back here again. This time, I clicked the option “**Colorize**,” then adjusted accordingly. I didn’t want the sky too saturated - the lighting in the rest of the picture looks like overcast skies.

**Tip:** “Select,” “Inverse” I did this to select everything but the sky, and put a brush of 1% opacity light blue over everything to reflect the new sky color.
Extraction

A different way to get rid of things - by wiping them away entirely.
(ONLY CS1-3, step-by-step directions are on the next page)

Sometimes, you want to do the opposite of what we just did with the clone stamp - you want to extract a person from a background.

I happen to think that this priest with the Harry Potter backpack is awesome, and I’m going to take him out of Vatican City.

Go to “Filter,” then “Extract.” Use the highlighter tool (already selected) to trace around the whole outline of what you want to keep, then use the paint bucket to fill in the object.

After you hit “OK,” your image will be extracted! But the edges will be a little rough; zoom in to go around and clean them up with a hard brush eraser.

Check the longer version of the directions for how to clean up your edges even more.
Removing a Background/Extracting an Object

The Extraction Process - Photoshop

1. Open the file you want to extract an object from or remove the background from in Photoshop - “File,” “Open.”
2. Double-click the layer with the picture on it to unlock it, click “OK.”
4. Using the tool already selected (highlighter/brush) begin outlining what you want to keep.
   - Only mark outside the edge - anything you want to keep must not have green on it.
   - Zoom in a fair amount to get smoother edges.
   - Hold “shift” while clicking to create straight lines between clicks.
   - Make a smaller or larger brush as necessary, especially useful for doing small areas and cracks.
5. When the whole image is outlined in green, take the paint bucket icon on the left menu and click to fill the area you want to keep, then click ok.
6. The image is now extracted - now go along the edges and use a hard brush eraser tool to get rid of anything “hairy” or pixilated.
7. Right-click the cleaned up image in the Layers palette, select “Duplicate.”
8. Click on the uppermost layer, go to “Filter,” “Blur,” “Gaussian Blur,” set blur to about 3.5 pixels, click OK.
9. Hold ctrl and click the blurred, uppermost layer. This will make marching ants around the image outline.
10. Go to “Select,” “Modify,” “Contract,” and set contract at a number so that the selection is a tiny bit smaller than the image.
11. Use the eraser tool and erase the entire selected area - this should have eliminated the vast majority of the blurred picture, and just leave you with a nice blurred outline. Ctrl-D will get rid of the outline.
12. If the edges still look nasty, do this:
   - Select lower layer, or the layer that has whole sharp image, ctrl-click for selection.
   - Go to “Select,” “Modify,” “Contract,” and contract the selection half as much as you did initially.
   - Go to “Select,” “Inverse,” and use the eraser tool to erase everything selected
   - Ctrl-D will deselect the image and get rid of the marching ants.

Saving - VERY IMPORTANT

1. Shift-click each layer in the Layers palette to select both of them at the same time.
2. Right-click the selected layers, go to “merge layers.” Do NOT use “flatten image.”
3. File, Save As:
   - Add “extracted” to the end of the file name.
   - Make sure the file saves as a .TIFF.
   - Click “Save,” WAIT FOR MENU AFTER SAVE.
   - On second menu, click “Save Transparency.”

Using an Extracted Image in InDesign

1. Go to “File,” select “Place.”
2. Find your file, it should have “extracted” at the end of the file name.
3. Picture might be enormous in InDesign; drag until you see the middle of it on your screen.
4. Right-click the image, go to “Transform,” then “Scale.”
5. Make sure “uniform scale” is selected, and shrink it to fit your page.
Drop Shadow

This will make inserted objects look even more realistic.

Ctrl-drag the layer with the priest to copy it (or just plain copy the layer). You should now have two priests directly on top of each other.

Ctrl-click the lower layer of the two priests to outline him. Use a hard brush at 100% black to color him in. You won’t be able to see this because it’s behind the other layer. Deselect.

Filter, blur, Gaussian Blur, set blur high to make the black show up and look like a hazy black cloud.

Use the free transform tool (ctrl-T) and drag the top of the blur so that it goes all the way down past the feet, nudge it up so it looks like a shadow.

Set the layer opacity on the shadow lower.

Go all the way past the feet - think of how shadows look.

If this disappears, Window, Layers will pull it up.

Set the layer opacity on the shadow lower.
There are a million things you can do with Transform

To demonstrate this tool, I'm going to put our priest from Extraction into another picture. To select him, Hold ctrl and click on the picture of the layer with the priest; this will make marching ants around him, copy.

I'm going to ctrl-p paste the priest into the picture I fixed in Selection. EK! He’s HUGE!

Ctrl T to bring up Free Transform, and drag the corners while holding shift to scale him down proportionally, and put him where his new size would be logical.

I’m going to adjust the brightness, contrast, hue, and saturation on the priest’s layer to make him look more like he belongs there, the light is too hard as is.

Lowered brightness, contrast, saturation; hue moved to a little yellow. Now he looks less like he’s standing in direct sunlight, and more like he’s in an alleyway on a somewhat overcast day.
Fun With Free Transform

Edit, Transform has a pullover menu with more options. Double-click the layer in the layers palette to unlock before using free transform.

- **Original image**
- **Distort - top squashed, bottom stretched**
- **Skew - right side expanded, left shortened**
- **Perspective - left side stretched**
- **Warp - all over**
- **Lasso eye, copy, paste on new layer, scale, warp, erase**
The Clone Stamp

The ultimate way to get rid of things - hair, zits, people...

To use the **clone stamp**, hold down “**Alt**” to select an area. You’re selecting a “good” area that you’re covering the “bad” area with - whether that’s clear skin, grass, or in our case, wall and stairs to cover this guy.

You definitely want to use a **soft brush** instead of a **hard brush** (see check mark and x).

You may have to try a few times to make your selection so you clone *exactly* what you want - I wanted the exact angle on these stairs, which took a few tries.

If you’re covering a large patch, select from a bunch of different areas to make it look less “fake” - I wouldn’t want the exact same crack in the wall showing up over and over.

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All I did here was sample the edge of the stairs lower than where the guy was standing, keeping perspective in mind the whole time.
The burn and dodge tools are located on the main Photoshop toolbar, and are actually both on the same button - hold the button down to get to the other one. My original image here isn’t so bad; it’s a little too bright. But when we try to use brightness/contrast to try to fix this by making it darker, it makes it so dark, we lose fruit color detail.

Undo the adjust; is everywhere I went with a 50% exposure soft brush burn tool, but this image still isn’t all it can be.

In and , I used a very small dodge tool to hit the vegetables a bit, and make them pop a little more. You don’t want to use the dodge tool too much, because it makes a “halo” of white around the object.
I like this picture, but I hate the background with all of that sideways construction business. I needed to find a nice picture that had a similar direction of light (coming straight into the camera), otherwise this wouldn’t be convincing. And why not use Italy for a background?

There was a lot to do here, but most of the work was erasing around the tiny strands of hair blowing around. I erased out the background using both soft and hard erasers usually around 3 pixels, used the dodge tool on the tips, then used a large, soft, semi-transparent eraser to blend the foreground with the background.
Layer Properties & Lighting Effects

There's a lot more to layer effects than just transparency.
Layer Properties & Lighting Effects

There’s a lot more to layer effects than just transparency.

1. The original image. I’m going to use the magic wand to select the background, then the lasso (while holding down shift or alt) to add or subtract from the selection so I just have the sky selected.

2. I deleted the sky selected in step 1, cleaned up some things like extra wires, and placed an image of a sky with similar light direction on a new layer behind the building.

3. Time to make this building look like it goes with the sky. I ctrl-clicked the preview image on the building layer in the layers palette, then made a new layer with my selection still up. I chose orange from the new sky using eyedropper and then used the paint bucket to fill the shape of the building in with that color. I made another layer, duplicated the same process; this time selecting purple from the background as fill color.

4. Here is where layer properties come into play. The Layers palette has a pulldown menu that says Normal. We’re going to change it to Multiply for both of the layers with the blocks of color, then adjust the overall layer transparencies on both of those layers; I have my orange at 50% and purple at 35%.

5. Now, I went back to the color layers with a soft eraser, and erased away the very edges of the right side of the building - you can kind of see this if you look at step 5 - that whitish glow on the right side. This is to make the light hitting the building look stronger.

6. This isn’t layer properties, but it’s something I like to use. Under Filter, go to Render, then Lighting Effects. You’ll get this menu - play with the size and intensity of the light using both the sliding bars and by dragging the corners of the actual light in the example, and make sure it makes sense with the lighting in the image.

7. I did some dodging and burning on the original image to make the lighting look better, and is my final product!
Adjustment Layers

Adjustment layers allow you to toggle basic adjustments on/off. This allows you to go back and make changes to previous adjustments.

Adjustment layers allow you to make the same adjustments you made in doing basic photo editing ten pages ago, but in a more specific manner. They’re located under Layers, go to Adjustment Layers.

Suppose you know you want to adjust the hue on an object placed on a background, but you aren’t sure how it’s going to look overall until you’re done. You’d want to put an adjustment layer above the layer with the object, click Use previous layer to create clipping mask, and now when you do your adjustments, it will only effect that one object - and you can go back and change the sliders if you want to.

On the other hand, if you wanted to make an adjustment that would effect the entire image and not just one layer, adjustment layers is what you want again. Go to the upper-most layer, create an adjustment layer, unclick Use previous layer to create clipping mask then make your adjustments. This will effect every layer below where the adjustment layer is, so if you want to effect everything but one layer, put that layer on top of the adjustment layer.

The best thing about adjustment layers is that they give you the flexibility to go back later and change any adjustments you made to a piece of the image.
Filters

Everyone loves a Photoshop filter, but they’re painfully obvious. The key is making it look like you never used one, which can be tricky.

These are some of the more tasteful of the Photoshop filters. There are plenty (like anything under Texture or Stylize) that are really, really obviously filters if you use them on a whole image. Play with the adjustments enough that the image doesn’t look so fake. Remember - a good filter will not save a bad photograph. You might be able to get a slightly-out-of-focus image to look better by applying a filter to disguise the blur, but unless the photo has good composition, lighting, color, etc., it’s just going to look like filtered crap. Once you’ve seen what the filters can do, you’ll probably start noticing images that have had nothing done to them but have a filter slapped on.
Content-Aware Fill & Healing Brush

These are powerful features only available in CS5 that eliminate the need for clone stamping and extraction.
**Content-Aware Fill & Healing Brush**

These are powerful features only available in CS5 that eliminate the need for clone stamping and extraction

1. To get started, I used the lasso tool to get a rough line around this kid. Precision isn’t necessary.

2. With just the kid selected, I went to Edit, Fill.

3. Once the menu for Fill comes up, make sure that the menu next to Use says Content-Aware, then click OK.

4. Ta-da! The kid is completely gone, and where he was is filled in with grass and sidewalk. There’s a little smear of ledge out of place, but nothing that the clone stamp can’t solve.

5. I’m going to undo back to the point that I have the kid outlined with the lasso tool again. Remember, if you want to clean up your selection, hold shift to add to a lassoed area, and alt to subtract.

6. Instead of filling the selected area, I’m going to Ctrl-X to cut the kid out of the picture so I can use him somewhere else, then Ctrl-V to paste him on a (hidden) new layer.

7. With the white space still selected, I’m going to go to Edit, Fill, and do the Content-Aware fill again. Because we did the fill a little differently this time, we’re left with a sort of ghostly halo around where the kid was.

**Note:** The Healing Brush is available in CS2-5, it just works best in CS5.

8. To get rid of this halo, we’re going to use the Healing Brush. While this feature was available in earlier versions of Photoshop, it has been refined and actually works as intended now. Drag the brush over the halo, or over anything else you want to blend in. Don’t try to use this tool for taking out large patches or anything completely different from the area around it; it works best with small, thin areas to fix, like power lines, fences, or anything else that has a lot of “good” context area around it from which to pull.
Helpful Hints

Label your layers: This is one of the biggest mistakes you can make when working on a really big document with lots of layers. I’m really bad about this - I’ve had documents where I’ve gotten up to Layer 47 and realized how much anxiety I have from constantly clicking on and off each layer to figure out which one I need to work on.

Do it on another layer: If you’re adding something to an image, whether it’s color, another image, a filter, etc. try to do it on a separate layer, so it will be easier to go back if you mess up. Or duplicate your image, then hide the original layer so you won’t mess it up, and just work on the duplicated image.

When in doubt, zoom in more: If you’re not sure how good something is going to look when you’re done messing with it, my advice is always to get closer. But then make sure that you occasionally zoom out to see how it looks overall.

Save often, save well: Photoshop is a huge program that tends to crash often and without warning. Make sure you’re saving every 5 minutes or so, that way you won’t lose an hour and a half of your life. Also, keep your save file titles very specific - that way, they’ll be easier to find.

Don’t work with low resolution pictures: If you’re finding images online, make sure that you’re only searching large images. Also, when you make a new document, try to work at 100-200 dpi; 300 is ideal if you want to print anything.

Be flexible: This guide is as flexible as possible for as many versions of Photoshop as it could be, so it’s not perfect. Use the internet to search for more in-depth instructions for your particular version of Photoshop; but this guide should help with the basics.

Don’t be afraid to ask for help: This is one of the largest programs out there. If you get stuck, ask the people next to you, and if you still don’t know how to do something, ask your teacher!
**Vocabulary**

**Brightness:** The relative lightness of an image. Adding too much will make a photo appear overexposed and bleached, having too little obscures details and makes the photo look dark.

**Contrast:** The *chiaroscuro*, or light/dark balance of an image. High contrast images have sharp shadows and strong highlights, low contrast images look relatively gray. Adjusting the contrast too high might make the image pixillated or too dark or bright; adjusting the contrast too low makes the image gray and blurry.

**Hue:** The relative color of an image. Adjusting the hue can help some poorly exposed photos from looking too green/yellow, or can make a highly abstract and totally different color palette.

**Saturation:** The amount and intensity of color in an image. High saturation makes an image look surreal and Wizard of Oz-esque (with the cost of pixilation), low saturation is close to (or is) black and white.

**Pixilation/Noise:** Enlarging an image too much or sharpening an image too much creates pixilation or noise - when you can see the individual, chunky pixels of an image; often much brighter and stranger colors than what you wanted.

**Marching Ants:** The dotted line around a selected layer or object, so named for looking like a long row of moving ants.

**Contiguous:** Sharing a common border, or touching - having this selected means it (the magic wand tool) will only select pixels of a same color that are touching each other. Deselecting this will select all pixels of a similar color.

**Soft Brush:** A blurry-looking brush used as both a paint brush and an eraser, it fully paints or erases only in the middle, then gradually fades out toward the edges. Generally what you use for trying to make something blend, i.e. clone stamp, or if you’re mixing two images together.

**Hard Brush:** A hard, defined-looking brush used as both a paint brush and an eraser; it fully paints or erases the entire area it covers. Generally what you use if you want to make a hard edge or line, i.e. extracting an image, or drawing.

**Burn:** A tool that darkens pixels as the tool is brushed over. Derived from actual darkroom photography, where you would expose parts of a photo to the exposure light for longer than other parts.

**Dodge:** A tool that lightens pixels as the tool is brushed over. Derived from actual darkroom photography, where you would cover parts of a photo from the exposure light during the exposure process.

**Filters:** Ways to change the appearance of an entire image by adjusting brightness, contrast, hue, saturation, blurring, sharpening - all at once.
Troubleshooting

NOTE FOR MAC USERS - Replace all “Ctrl __” commands with “⌘ __”

My cursor is gone/my brush has become a crosshair!

Caps lock toggles the visible cursor on and off. Just turn it off!

How do I get marching ants around just the content of one layer?

While holding control, click on the small preview picture in the layers palette. This should select the content of that layer.

When I try to do anything, it says my layer is locked.

Double-click your active layer in the Layers palette to unlock it.

I opened my document, and it’s blank.

You’re probably using a large server if you have this problem, and it means you’re saving your document in more than one place under the same name. Do a general search on the computer for your file name, and see if it shows up anywhere else. Don’t save your file in multiple places under the same name.

When I import a picture, it’s huge/tiny

If this is happening, your resolution isn’t what it should be. Go to File, New to make a new document. By default, it has “pixels” as the measurement. Change to “inches,” then make your document whatever size you need it. Lastly, and most importantly, where it says “Resolution,” change it to 300 pixels/inch, and then click OK. Import or paste in your picture, and you’ll get a good idea of how it will look when it’s printed. If the image is very small, that means it’s a low resolution image - find a bigger one.

When I bring a picture with a blank background from Photoshop into InDesign, it’s making a white background instead of leaving it blank.

Sometimes this can be solved within InDesign, but if you want to solve this from Photoshop, there’s a different process. Make sure your image doesn’t have any kind of background layer - in standard view, you should see your image isolated on a checkerboard pattern. Right click a layer in the Layers palette, click on “merge layers.” Now go to File, Save As, and under Format, make sure the document saves as a .TIFF. Click Save, then on the menu that comes up, click “Save Transparency.”

I don’t have Extract in my version of Photoshop.

CS4 and CS5 do not have this option, although it is downloadable for CS4. In CS5, the lasso tool has a feature that is available in CS3 and later, but wasn’t very good until CS5. After you roughly lasso an object, you can use the “Refine Edge” feature to get the sort of precise edge removal that you had in Extract. If it still isn’t doing what you want, you can just use the eraser tool around the edges.