



19 October 2022

Dee Why RSL Camera Club

**Workshop Photoshop Basics**

Exercise Instructions

# Introduction

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In this exercise, we will change the colour of a subject's eyes in a photo from brown to blue. Furthermore, we will clean up the subject's skin and improve the image's general look & feel by applying some dodging and burning. Finally, we will export the result to a file that meets the club's guidelines for showcase submissions.

To do so, we will use

- Layers, in particular the **Curves...** and **Hue/Saturation...** adjustment layers
- Selections and masks
- Blending modes
- **Spot Healing Brush** tool
- **Crop** tool

## PREPARATION:

Open Adobe Photoshop.

Open the image **pexels-engin-akyurt-1435823.jpg** that you [downloaded from pexels.com](https://www.pexels.com) to your computer before this workshop:

- Either click **File**, then **Open...** in the menu bar and browse to the file.
- Or click **CTRL+O** and browse to the file.
- Or drag and drop the file from the Windows File Explorer into Photoshop.

Depending on your Photoshop preferences, the image may open in Camera Raw, a plugin that (in a separate window) lets you do the same image adjustments as Adobe Lightroom: light & colour corrections, noise reduction & sharpening and much more. For our photo, we will ignore this step and go straight into Photoshop by clicking the **Open** button in the bottom-right corner.

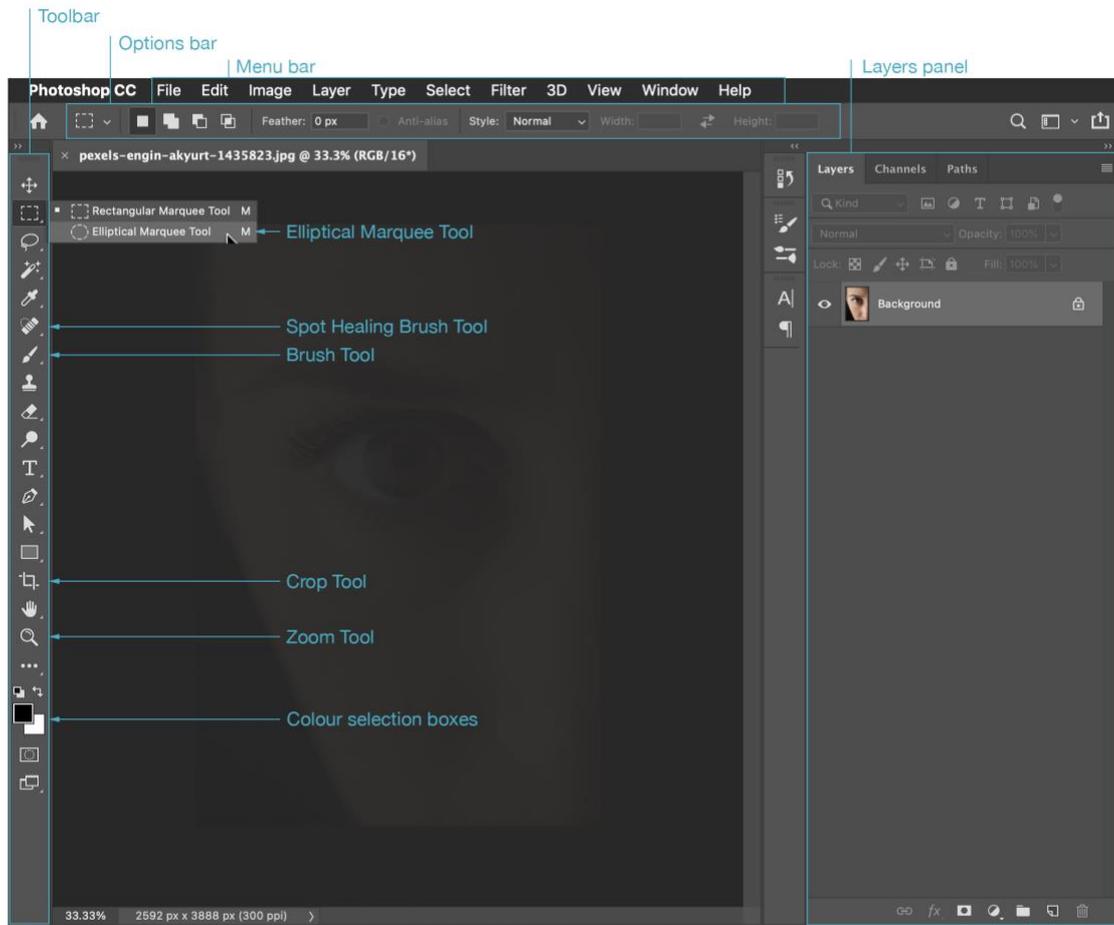
Once the photo has been opened in Photoshop, make sure that the **Layers** panel is visible: In the menu bar choose **Window** and tick **Layers**.

Adjust the document window (the area where the photo is shown) to your liking:

Hit the **F** key to toggle between **Standard Screen Mode**, **Full Screen Mode With Menu Bar**, and **Full Screen Mode**, and choose the one you like. When working with one image, the second one may be the most suitable.

Hit **CTRL+1** to see the photo at 100%, or **CTRL+0** to let it fit the screen. You can also use the **Zoom** tool (keyboard shortcut **Z**) to zoom in (**CTRL++**) or out (**CTRL+-**) to any magnification you like.

## THE MAIN INTERFACE AND TOOLS THAT WE WILL USE:



Icon Create new fill or adjustment layer  
Icon Create a new group  
Icon Create a new layer

# Part 1 – Changing the eye colour

1

Blue eyes are usually brighter than brown ones, so we will brighten up the eye using a **Curves** adjustment layer.

This will, however, impact the whole photo, not just the eye. Hence, we must select the iris first. There are multiple options, for instance the **Object Selection** tool, the **Quick Selection** tool, or the **Elliptical Marquee** tool. We will use the latter.

1.1 Select the **Elliptical Marquee** tool  from the toolbar. Click somewhere in the top left corner of the eye to mark the spot where you want to begin the selection. Then, while still holding down the mouse button, drag towards the bottom right corner of the eye. As you drag, an oval selection outline (“marching ants”) appears around the eye.



You will notice that while you are dragging out the oval selection, its outline moves further and further away from the spot you initially clicked on. This can make it next to impossible to begin the selection at exactly the right spot.

There is a trick that lets you reposition the oval selection: While you are drawing the oval selection, hold down the spacebar. Use your mouse to drag the oval selection back into position. Then release the spacebar to continue shaping the selection.

1.2 When you are happy with the selection, create a **Curves...** adjustment layer:

- Either choose **Layer**, then **New Adjustment Layer**, then **Curves...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel and choose **Curves...**

1.3 Move a point in the bottom (i.e., left) section of the curve up to lighten the iris, in particular the shadows.

To give you some clue: A curve where Input: 60 is mapped onto Output: 100 is a good starting point. But feel free to brighten the iris more or less. And remember that these settings can be adjusted at any time.

2

In this step, we are going to change the colour of the iris. There are multiple options, for instance a **Hue/Saturation...** adjustment layer, or a **Solid Color...** fill layer set to blending mode **Color**, and you are encouraged to try both.

2.1 In this tutorial, we are using the first approach:

- Either choose **Layer**, then **New Adjustment Layer**, then **Hue/Saturation...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel and choose **Hue/Saturation...**

2.2 Move the sliders so that the iris becomes a rather desaturated blue.

To give you some clue: Hue: -180 and Saturation: -88 is a good starting point. However, these settings can be adjusted at any time, and of course they reflect personal taste.

2.3 As you can see, the whole photo got a colour cast. So, we must restrict it to the iris by first selecting it, and then adding a mask to the adjustment layer. We could do the same as what we did in the first step. Or even easier, we could copy the mask from the **Curves...** layer to the **Hue/Saturation...** layer. However, this comes with a big disadvantage: If we refine the selection at a later stage — what we indeed are going to do —, we must adjust both masks, the original as well as its copy.

3

There is a more elegant way: We will group all layers that affect the iris and then apply one central mask to the group.

3.1 Click on the **Curves...** layer. Then hold the **SHIFT** key and click on the **Hue/Saturation...** layer. Now both layers are selected.

3.2 From the menu bar, select **Layer**, then **Group Layers**. Alternatively, click the **Create a new group** icon  in the **Layers** panel.

As a result, a new group is created, which contains both layers. Click its little arrow icon to expand its contents.

3.3 Click the mask thumbnail of the **Curves...** layer and drag it to the group. Now the group has a mask the shape of the iris, and all layers within the group — including the **Hue/Adjustment...** layer — are affected by the mask. In other words: Only the iris is brightened and got a blue colour.

4

It's time for a bit of housekeeping: To stay organised, we will rename the group and layers. This is good practice, and you should also do this with layers that we are going to create in the next steps.

4.1 Double-click the layer name "Curves 1"; you can now rename it, for instance to "brighten up iris". Do the same for "Hue/Saturation 1" and "Group 1".

5

Our mask is not perfect: In particular, its edges are too hard. We will smoothen and refine them. Furthermore, the pupil has also been affected by our changes.

5.1 Make sure that you have the group's mask selected: In the **Layers** panel, click the mask thumbnail of the group so it has a little border.

5.2 In the menu bar, go to **Filter**, then **Blur**, then **Gaussian Blur...** Choose a radius that is big enough to smoothen the edges, but small enough so the effect of our two layers isn't watered down, something around 8.0 pixels.

6

The iris in our photo isn't perfectly oval-shaped. Furthermore, in our initial selection (with the **Elliptical Marquee** tool) we accidentally also selected the pupil. We will correct this by adding to (or subtracting from) the mask using the **Brush** tool.

6.1 Select the **Brush** tool  from the toolbar.

6.2 In the options bar, there is a little preview of the currently selected brush tip. Click it to adjust the brush size and hardness. Our subject's iris is slightly feathered, so we suggest a hardness around 30% and a brush size of around 70 px.

Other settings in the options bar that we recommend using: Opacity 100%, flow 10%.

If you want to reveal more of the iris — i.e., if our mask is a bit too small — make sure that white is selected as foreground colour.

If our mask is too large, if areas of the eye other than the iris are affected by our layers, choose black.

6.3 Once again double-check that in the **Layers** panel the mask thumbnail is selected. On the photo start painting around the iris until you have achieved the result you want. If you accidentally hide parts of the iris (by painting black on the mask), you can easily correct this by painting white over it. Experiment with different brush tips, harder or smaller ones, and flows.



Zoom in to better see what you are doing: Select the **Zoom** tool from the toolbar and click on the iris multiple times. You can also use **CRTL++** or **CTRL+-**.

6.4 Change the brush tip settings to size 50 px and hardness 80%, choose black as foreground colour, and (in the photo) paint over the pupil to hide all layer effects in this area.



To quickly swap between foreground and background colours — here: between black and white —, use the keyboard shortcut **X**.

**7**

The basic adjustments have been made. Our photo looks okay, but not quite right. Reason is that the blue in eyes has some variations: It usually looks darker around the iris edge, and the iris centre is brownish. We will tackle these two eye characteristics in this and the next steps.

7.1 To darken the edge of the iris, we will proceed similar to step 1 and create a **Curves...** adjustment layer:

- Either choose **Layer**, then **New Adjustment Layer**, then **Curves...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel and choose **Curves...**

7.2 Move a point in the centre section of the curve down to darken the iris.

A rough idea: Map Input: 128 onto Output: 100. You may like it darker or brighter. These settings can be adjusted at any time, so you don't have to get them right straightaway.

7.3 The whole iris has been darkened. Which is also reflected by the fact that the adjustment layer's mask is completely white.

In the **Layers** panel, select the mask with your mouse cursor, then invert it so it becomes black (which means that no part of the iris is affected by the darkening layer). To do so

- Either choose **Image**, then **Adjustments**, then **Invert** from the menu bar
- Or simply click **CTRL+I**.

7.4 To darken the edge of the iris, we must reveal our **Curves...** adjustment layer in these areas. In other words: The mask must be white where we want the dark to shine through.

Choose the **Brush** tool  from the toolbar. Suitable settings to start with are size 100 px and hardness 0% for the brush tip, opacity at 100% and flow at 10%.

Make sure that white is selected as foreground colour. Most importantly, make sure that in the **Layers** panel the mask thumbnail of the new **Curves...** layer is selected. Now start painting (in the photo) around the edges of the iris. The mask will gradually become white, and the iris darker. If some areas become too dark, simply swap to black and paint over these areas again.

**8**

Now we will colourise the centre of the iris in a brownish hue using a **Hue/Saturation...** adjustment layer.

8.1 Like in step 2

- Either choose **Layer**, then **New Adjustment Layer**, then **Hue/Saturation...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel and choose **Hue/Saturation...**

8.2 Move the sliders so that the iris changes to a yellowish, brownish colour.

A good choice is Hue: -175 and Saturation: +90. However, these settings can be adjusted at any time, and of course they reflect personal taste.

8.3 The whole iris has been affected, so like in step 7 we invert the mask of this new layer by

- Selecting the mask thumbnail in the **Layers** panel, then
- Hitting the keyboard shortcut **CTRL+I**.

8.4 Make sure that the mask is still selected in the **Layers** panel. Using a small brush (size 20 px, hardness 0%) and white colour, paint on the photo to reveal some areas around the pupil. Simply zigzag from the pupil's centre into the iris.



With the mask thumbnail in the **Layers** panel selected, apply a Gaussian blur to achieve an even more realistic result: In the menu bar, select **Filter**, then **Blur**, then **Gaussian Blur...** A radius of 20 pixels will probably work well.

**9**

The upper part of the iris, which is shaded by the eyelid and eyelashes, looks too bright. To fix this, we repeat the steps from step 7:

9.1 Create a **Curves...** adjustment layer:

- Either choose **Layer**, then **New Adjustment Layer**, then **Curves...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel

and choose **Curves...**

9.2 Move a point on the curve down to darken the iris. In the demo, Input: 60 was mapped onto Output: 50.

9.3 The whole iris has been darkened, so we must invert the mask of our new adjustment layer:

In the **Layers** panel, select the mask thumbnail with your mouse cursor, then click **CTRL+I**. Now no part of the iris is darkened.

9.4 Choose the **Brush** tool  from the toolbar.

Make sure that white is selected as foreground colour, and that in the **Layers** panel the mask thumbnail of the new **Curves...** layer is selected. Now start painting (in the photo) to gradually reveal the impact of the adjustment layer on the upper half of the iris.



To achieve a very smooth transition from dark to light, choose a rather large brush tip (for instance size 400 px) and hardness 0%. Set the opacity to 100% and flow to 5%. Then gently paint over the upper part of the iris only with the lower edge of the brush, but not with its core.

## Part 2 – Removing small blemishes

The focus of this tutorial clearly is on changing the colour of the subject's eye. But to get prepared for another common task — removing unwanted spots or small objects from your image — we will now investigate the **Spot Healing Brush** tool.

It is essentially a texture replacement tool, which tries to create a seamless repair by replacing damaged or unwanted texture from one area with good texture from another area, all without changing the problem area's original colour or brightness values. What makes the **Spot Healing Brush** tool so amazing and fast is that it does this with almost no effort from us.

**10** We want to continue working in a non-destructive manner. So instead of correcting blemishes on the photo layer itself, we first create a new one right above it.

10.1 Put your cursor on the lowest layer in the **Layers** panel, the one with the original photo.

10.2 Create a new fill layer right above it:

- Either choose **Layer**, then **New**, then **Layer...** from the menu bar
- Or click the **Create a new layer** icon  in the **Layers** panel.

**11** From the toolbar, select the **Spot Healing Brush** tool . Make sure that in the options bar the box **Sample All Layers** is ticked, and that you have selected the new fill layer in the **Layers** panel.

Choose a soft brush (hardness: 0%) with a size that is just slightly larger than the blemish you want to remove. Now simply click on the spot or, for larger objects, paint over them.



To quickly change the size of the brush tip, use the left bracket key [ to make it smaller and the right bracket key ] to make it larger.

## Part 3 – Dodging & Burning

A large part of post-production is emphasizing the parts of your photo that work well — and de-emphasizing the parts that don't.

By brightening (“dodging”) or darkening (“burning”) part of an image, you draw attention toward it or away from it. This technique can be used to enhance your imagery by creating three dimensionality and guide the viewer's eye.

There are countless ways to dodge or burn. An easy to use, non-destructive, and flexible one is using two **Curves...** adjustments layers — one that brightens the image, one that darkens it —, and then mask the areas that shall not be affected.

Our sample photo had already been enhanced before it was published on pexels.com. Hence, there is only little room for improvement. Still, we are going to apply dodge and burn, mainly to practice this technique a bit.

12

We will start with dodging, i.e., brightening parts of the image. To do so, we create a **Curves...** adjustment layer. As it shall not only affect the iris, make sure that it is not contained in the layer group that we created in part 1, step 3.

12.1 Collapse that group by clicking the little down-arrow left of its name. This will ensure that the new layer will be created above, i.e., outside the group.

- Either choose **Layer**, then **New Adjustment Layer**, then **Curves...** from the menu bar,
- Or click and hold the **Create new fill or adjustment layer** icon  in the **Layers** panel and choose **Curves....**

If you accidentally create the new layer inside the group, simply move it: Click the layer name, keep holding down the mouse button, drag the layer up or down the **Layers** panel to a new position in the stack, finally release the mouse button.

12.2 To lighten the photo, move a point on the curve upwards.

12.3 Select the new layer's mask thumbnail — which is pure white — in the **Layers** panel and invert it (**CTRL+I**). It will now be black, meaning that no part of the photo is affected by the **Curves...** layer.

12.4 Use the **Brush** tool  to reveal the adjustments in the areas where you want them to show. Usually, the best dodging (and burning) is subtle. You don't want your viewer to notice that part of the photo is unusually bright (or dark). Therefore, use a soft brush tip (hardness 0%) and minimal flow (3–5%).



If you are not happy with the result and think that it is too bright, you have three options to correct this:

With the layer mask selected, you can paint with black over those image areas that are too bright.

You can reduce the opacity of the adjustment layer.

You can pull back the point on the curve that you had moved upwards in step 12.2.

**13**

Burning is done in the same way, on a separate **Curves...** adjustment layer, just with the control point on the curve moved downwards instead of upwards.

Our eyes are drawn to eyes in photos anyway. To get the best results and amplify this behaviour, try to emphasise the natural flow of lights and shadows on the eye lashes, the eyebrow, the creases by gently making the lights brighter and the darks darker. Think of applying make-up!

## Part 4 – Saving, Cropping, Exporting

**14**

So that you can return to your image at any time and tweak the adjustments you made, it is necessary to save the image including all its layers and masks. Photoshop has got its very own file format, PSD (Photoshop Documents) that does exactly that.

14.1 To save your file, choose **File** from the menu bar, then **Save As...**

14.2 Photoshop will then give you the options to either store the file on your computer or on the cloud (limited file storage is included in your Photoshop subscription). Choose your preference.

14.3 Select a directory and specify the file name. Make sure to choose **Photoshop** as the file format.

**15**

A common task in preparation for club showcases is to resize your photo to a particular size, usually 1920 px × 1200 px. You could select **Image**, then **Image Size...** from the menu bar. However, in this example we also want to change the aspect ratio and therefore choose a different method:

15.1 Choose the **Crop** tool  from the toolbar.

15.2 In the options bar, choose **W x H x Resolution** from the dropdown.

15.3 Enter the values “1920 px” and “1200 px” in the first two fields. You can leave the third field (for the resolution) empty.

15.4 Make sure that the checkbox **Delete Cropped Pixels** is not ticked! This allows you to revert your decision at any point in time. (However, there may be circumstances where you want this box to be ticked, because the resulting PSD file will be smaller in file size.)

15.5 Click in the image. A border will appear.

15.6 Use the little handles on this border or reposition the image within the frame to select that part of the image, which you want to keep.

15.7 Confirm by clicking the **Commit current crop operation** checkmark in the options bar.

**16**

To share the result with others who do not own Photoshop, or to post it on a website, submit it to a showcase etc., we have to export the file to a different format, usually JPG if it's a photo.

16.1 From the menu bar, choose **File**, then **Export**, then **Save for Web (Legacy)**. This opens the **Save for Web** interface.

16.2 In this interface, click the tab **2-Up**, which will show you two versions of the image so you can compare them: The original one on the left, and the export version on the right.

16.3 Click on the right image to make it the active one that the following adjustments will be applied to.

16.4 In the **Preset:** dropdown, select **JPEG High** as starting point.

16.5 Below the right image you can see the file size of the exported file. If you want to submit it to a camera club showcase, it must not be larger than 1.5M. You can now adjust the **Quality** slider until the file size meets this criteria.

16.6 Make sure that the checkbox **Convert to sRGB** is ticked (which it is by default), but leave all other options untouched. Click the **Save...** button, select a directory and specify the file name. The file extension .jpg will automatically be chosen for you.

Note: When you export an image using the **Save for Web (Legacy)** feature, Photoshop will replace any space in the file name (like "my image.jpg") with a hyphen because of Internet file name conventions.

# Keyboard Shortcuts

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Using keyboard shortcuts lets you work with Photoshop much faster. Photoshop comes with a huge number of shortcuts, and you can even define your own ones (in the menu bar choose **Edit**, then **Keyboard Shortcuts...**). Frequently used default shortcuts on Windows are:

## VIEW AND ZOOM



Fit on screen



Actual size, i.e., 100%



Zoom in



Zoom out



Toggle between Standard screen mode, Full screen mode with menu bar, and Full screen mode



If you have zoomed into an image and want to work in another area without zooming out and then zooming back in, press and hold the spacebar on your keyboard. Your cursor will turn into a “hand”, allowing you to pan and scroll the canvas.

## TOOLBAR



Brush tool



Crop tool



Default colours (foreground black, background white)



Move tool



Switch foreground and background colours



Zoom tool



Decrease the brush tip size



Increase the brush tip size

#### SELECTIONS AND FILL



Deselect



Invert