Module Five Assignment: Aperture

Learning Outcomes

The aperture of a camera is used to control the size of the opening within the lens and can therefore be used to control the amount of light let into the camera. Though this is an important function of aperture, it can also be used to affect the depth of field within your images.

The depth of field of an image refers to the amount of the image that is in front of and beyond your point of focus. This is how you can create a blurred background to your image, which is seen a lot in macro photography.

Pre-Assignment Exercise

To really help you get to grips with aperture we have put together a little exercise for you to do - so you can see how it works in it’s simplest form.

(Note: if you don’t have a digital SLR camera you may not have as many aperture settings available for you to use.)

Before you start, you want to ensure that the flash is off and you have set your camera to aperture priority mode (if you don’t have this you could try using portrait mode instead). This allows the camera to choose the shutter speed for you, allowing you to focus (for the moment) on aperture.

For this exercise you could simply use your own backyard, a local park, or anywhere within your own home where there is a lot of available light.

Next you want to choose a static subject, this could be anything from a bench, garden ornament, or any still life object you can find around your home.

Then you want to follow the steps below:

1. Position yourself relatively close to your chosen object, and set the aperture to the highest f/number available to you - f/16 or higher would be best.

2. Pick a point on your subject to focus on and then take a picture.
3. Then, staying where you are and keeping the exact same framing, set the aperture on your camera to the lowest f/number available - f/5.6 or lower would be best.

4. Then, using the same point of focus, focus the image and take a picture.

When comparing the two shots on the camera you should be able to see a clear difference between the two images. To really show you how the aperture gradually affects an image you can set the image up again, but this time take 5-10 photos, each time reducing the aperture by 1 or 2 f/numbers. Here is an example of the image progression you should then see:

<table>
<thead>
<tr>
<th>F/16</th>
<th>F/8</th>
<th>F/5.6</th>
<th>F/3.5</th>
<th>F/2.8</th>
<th>F/1.4</th>
</tr>
</thead>
</table>

All cameras are different, and a lot of compact cameras and bridge cameras are limited to the number of aperture settings that are available. If you find that the background is not as blurred as you would like, if possible, try moving the subject further away from what is in the background, and you should see the background become more out of focus.

Hopefully you will have noticed, whilst using your camera in aperture priority mode, that the camera sets a different shutter speed as you change the aperture. As you vary the amount of light entering your camera, different shutter speeds are needed to create the correct exposure. The less light you let in (using a high f/number) the longer the shutter speed needs to be and vice-versa.

**Assignment Details**

For this assignment please choose either a **Narrow** or **Wide** depth of field to use in your photograph.

So now you can take what you have learnt from the exercise above and within the module and apply it to your photos. Using aperture try to create various images experimenting with both a narrow depth of field (a low f/number) and a more detailed shot with a wide depth of field.
Remember when you are creating a wide depth of field (a high f/number) you still need to pick a single point to focus on, and then the rest of the image will take care of itself.

For this assignment you’ll want to pay close attention to your focus, as the use of a shallow depth of field highlights a small area, so you want that to be nice and sharp. With a wide depth of field, if you don’t have a sharp point within the image, then the whole photo can come across as a little soft.

You may find it easier to work with your camera in manual focus, if this is something you are comfortable doing.

Submission Details

For this optional assignment please choose and submit ONE of the following demonstrations of use of aperture:

- Narrow depth of field (using a low aperture to create a blurred background)
  
  Or,

- Wide depth of field (using a high aperture to create an image with lots of detail through the shot)

Please submit your image through the Assignment Submission area, which is accessible through the dashboard.

If there is more than ONE image submitted, only the first image will receive tutor feedback.