



Art + Design Studio  
Digital Documentation Workshop

**Why do you need a digital portfolio?**

A digital portfolio represents and records your efforts and achievements throughout the course of your academic, professional, and individual learning experiences.

Nowadays graduate programs, residency programs, publishers, and even galleries need digital versions of your artwork instead of traditional slides.

Now digital artists and traditional artists both need to have a digital portfolio for showcasing their works. This will be one of the main outlets for public reception of your art and a major step in amassing an audience for your work.

For our purposes we will focus on creating a Foundations Portfolio made up of images from your work in your Foundations classes: Art 1011(or 1008), Art 1012(or 1009), and Art 1847(or 1010). This Foundations Portfolio will be used as part of the Selective Admissions process in the School of Art.

**What are the benefits of a digital portfolio?**

- No printing costs.
- It is easy to make, save, and update.
- It can be emailed, stored on a jump or external hard drive, and/or burned to a DVD for easy delivery.

All you need is your work. You can get other equipment from the studio at CXC.

The first thing you need to do is collect a representative sample of the artworks that you wish to include in your digital portfolio. Select your works which complement each other and demonstrate your unique style in addition to mastery of art skills, conceptual talent, and proficiency in a variety of artistic techniques.

After that your resources are a high resolution camera or scanner, a computer, Photoshop software.

Three important things for a digital image:

**1. Digital Camera**

12.0 Mega Pixel (or higher) is all you need to make digital slides from digital photos. Or use a scanner for images and save them on a storage device.

Always take more than one photo under different settings. Digital cameras are great for multiple exposures. It is better to use a tripod and set the camera on an automatic timer option to avoid shaky hands and blurry photo problems. Do not rush at any point.

If you have a transparent work, place white paper behind it. It is better if the background is white. You will get all the colors of your work more prominently, and it is easy to crop the image from a flat backdrop while editing it. Some images may require black backdrops or muslin.

An eye level angle helps you to avoid distortion of the art work. If it is a 3D work, you will want various angles and details of the work.

It is better if you take all the photos horizontally (no matter if it is vertical or horizontal). A rectangular camera frame can cover more if it is a horizontal image.

Please refer to **CxC Camera Guide** for more detailed information on Aperture, Shutter Speed, Light Metering, and Color Balancing/Light Temperature.

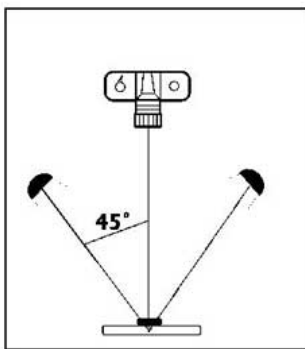
## 2. Light

The most important part of every picture is the light. It affects the appearance of the portfolio. The best light is the sun. You can get the full spectrum of colors in natural light. Morning or late afternoon light is good for an image and reduces shadows (including your own) on your work. High noon is generally avoided because of the harsh shadows and blown-out colors it creates.

Hanging: before attaching the photo on the white backdrop for documenting, draw a level, horizontal straight line on it and adjust the edges of the work with the backdrop while displaying; it will be easier for you to crop and resize it in Photoshop.

For relief prints with thick colors and oil color paintings, it is better to take it in the daylight rather than using spot light. If a spot light must be used, at least diffuse your spotlight to give your painting a full range of light intensity.

If you are using artificial light, you want plenty of indirect light. Direct light will cause harsh shadows, which you do not want. Do not use flash. Flashes wash out colors and details.



For in studio lighting, pay attention to the **45 Degree Rule** to ensure your pieces are properly lit and presented. To ensure you do not wind up with any harsh shadows, place a key light 45 degrees off from your main lighting source (at around 70% the intensity) to help soften the dark spots in your picture. Studio lights use diffusers in front to divide the light more evenly across the whole scene; you may also place reflectors underneath your lamp to kick more light to the underbelly of your piece. Umbrellas are used fill a larger space with a wider angle of more intense light. Be sure to pay attention to the height of your lamps as well. Adjust them so one is taller than the other to change the contrast of harsh shadows into smooth gradients.

It is also important to consider the color or intensity of your light when shooting. White balance your camera before shooting to capture the truest value of your colors. Tungsten lights tend to make things more yellow, while a fluorescent light gives off a more blue-ish glow. There is no need to overdue white balancing, however, as there are many tools in Photoshop and Camera Raw that can correct color.

Also, exercise caution with lighting, not doing anything dramatic—remember many effective lighting adjustments can be made on the computer in terms of color and intensity. A nice range of all values is what you are looking for—not blown-out white or pure black areas in the image.

### 3. Digital Editing

Basically, you will need to crop, resize, and adjust each image. Try to keep things simple.

First find the cleanest shot of your work and then crop your image. For the Foundations Portfolio begin by using the Rectangular Marquee Tool to crop your images of any unneeded space at the edge of your artwork. It is always best to shoot too wide rather than too narrow; you can cut out excess but not add to your composition. After your image is properly cropped, rotated etc., copy and paste into a new file of specified size.

With your properly cropped image you will need to resize. For our purposes all images should be 72dpi with the longest edge, either height or width, set to 1000 pixels. Begin by opening your cropped image. Under the Image Menu open the Image Size option. First change the resolution to 72 pixels/inch, and immediately after change the Width or Height, whichever is larger, in the Pixel Dimensions Box at the top of the window to 1000 pixels. This will resize our image to the needed dimensions.

Finally you can adjust the Levels and Curves to bring out more detail and allow the piece to translate well to a digital format. These tools will allow you to alter the values and contrast slightly to help your image look its best. More advanced students can use the Color Balance tool. This will allow you to remove subtle color tints to your image that you may not want. Please be aware that you are not trying to drastically change the color; just alter it enough to represent the colors in real life. Use it sparingly.

Finally you will always save your image in .jpg format for the Foundations Portfolio.

In your professional life you may use .png for the web, and .psd for any future editing. Pdf is the most secure of all file formats and usually used for printing and publishing.

Notate files sizes in file names and remember to always keep a print quality 300dpi image stored somewhere accessible.<sup>1</sup>

**\*\*Remember digital images are representations of your work. There is absolutely no way to perfectly capture the intricacies of the original piece. Just do the best with what you got. Remember this process takes practice and you know your work better than anyone else, so take advantage of that fact. The important part is to improve as you go, to document and publicize your work, and to take initiative to put that work to work for your future aspirations.**

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<sup>1</sup> There will be different requirements for resolution. Always have a high resolution version of the original (300dpi), and then save lower res files separately. You don't want to upload any images to the web higher than 72dpi; it saves space and no one will be able to rip off your images.

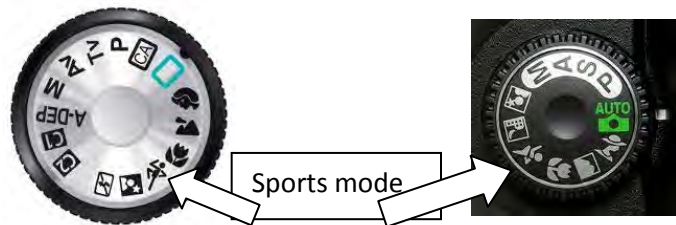


Before you shoot: adjust size settings to L (large) and format to either .tiff or .raw

4 important settings on a camera to always pay attention to: Shutter Speed, Aperture, Light Metering, and Color Balancing/Light Temperature.

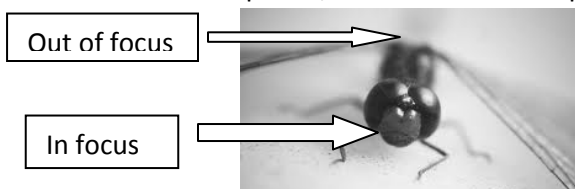
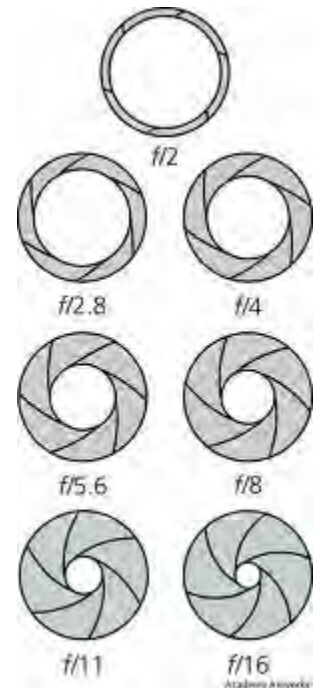
**Shutter Speed** – how long the shutter is open, or how long the camera will take in light

- Represented on the camera by a number that correlates to that number raised to negative one ( $x^{-1}$ ); so if the camera display says shutter speed is 250, the shutter will be open for  $1/250^{\text{th}}$  of a second. A bigger number on the display is a faster speed, because it is a smaller fraction.
- Can be adjusted by changing the camera setting to Tv or S, depending on the camera, or the little man running (sports mode). Both give you control over shutter speed.
- Controlling the shutter speed can significantly affect your picture. A faster shutter speed will make an image clearer without so much blurriness, but will also make the picture darker; while a slower shutter speed will make an image brighter, but anything that moves while the shutter is open, will become blurry.



**Aperture** – the size of the opening that lets light into the camera

- The aperture is measured in f-stops. The f-stops on a camera usually range from 1 to about 20 depending upon the quality of the lens. A small f-stop is a large opening, and a large f-stop is a small opening. So if I took the same picture with an f-stop of 6 and an f-stop of 18, the picture with an f-stop of 6 would be brighter than the other as more light was allowed into the camera than with the f-stop of 18. Also, smaller f-stops (larger openings) will give you a smaller depth of field, meaning the difference between what is in focus and what is blurry is smaller than normal. Large f-stops (smaller openings) will give you a larger depth of field, meaning the depth of what will be in focus will be large. This setting is perfect for landscape shots, or when you want to present an image with equal importance in multiple places, whereas a small depth of field (small f-stop, large opening) would be used to highlight a dominant feature.



Utilization of a small f-stop to create a small depth of field: notice the head of the dragonfly is in focus, but the wings are not.

The combination of shutter speed and aperture settings can greatly affect the outcome of your photograph. Using Tv/S mode for adjusting shutter speed, and Av/A mode for adjusting aperture, you can control all aspects of the amount of light entering the camera. When in Tv/S mode, you can only adjust shutter speed, and when in Av/A mode, you can only adjust the f-stop, but M mode (manual) you can change both. Working in M mode will allow for the greatest amount of control when taking a photograph but the amateur photographer/documenter will likely want to use automatic settings.

Each change in shutter speed / aperture is equal to double, or 1/2. So, 1/50 will let in double the amount of light than 1/25. Or, f11 will let in double the amount of light than f16. Also, aperture priority is great when you do not care about how fast you want the picture taken, but you do care about "depth of field" or depth of focus. Set the aperture you want, and then the camera will find the correct shutter speed for you. The same is true with shutter priority; use this when you need fast image taking, but do not care about depth of field.

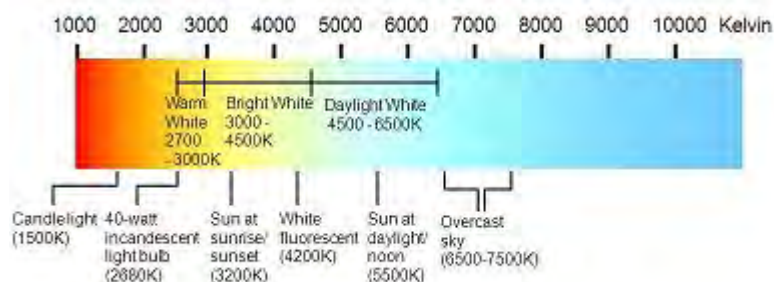
Keep in mind: it is good practice to use a tripod for any shutter speed less than 1/60<sup>th</sup> of a second.

### Light metering – device for determining the amount of light

The meter inside the camera decides what constitutes a "good exposure." But an adept photographer will be taking all sorts of things into account: how much of the image is in the sun or shade; is the sun in the view finder; etc. The lesson to learn is: meter the subject. The light meter in the camera is essentially a small circle in the middle of the 35mm frame. Internal light meters are a "best overall" meter, taking in all the aspects of the scene, and they are easily thrown off by bright light and deep shadows. More professional photographers also use hand-held meters and spot meters, which do a better job.

### Color balancing/light temperature – the color of "white" light

All light, be it indoor or outdoor, has a temperature that the eye adjusts to (examples in the graduated figure). When taking a photo, the camera sometimes adjusts the **white balance** like a human eye does. However, the camera doesn't always perceive it correctly.



To set the **white balance** on the camera, you can choose from various presets, such as "incandescent/tungsten," "fluorescent," and "outdoor shade," etc. This works some of the time, but there is a simple way to adjust it on the CxC DSLRs.



Your camera might not look exactly like the figure above, but the icons should be very similar.



(Custom White Balance)

To use custom white balance, at the beginning of a shoot, find a white sheet of paper (as white as possible) and take a well-exposed photo of it. Select the **custom white balance** setting and it will prompt you to select a suitable photo from the list of all photos to balance from. Select the photo you just took and it will calibrate the camera accordingly.