

# Class Reference Material

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## Introduction

When first learning to work with photos, I recommend learning one or perhaps two programs well before moving on. Once you learn the terminology and basic features, it will be easier to advance to programs or Apps with more capability. Therefore, this class will discuss editing photos with one or two programs on the PC and one or two Apps on the iPhone and iPad and recommend other ways to perform more advanced editing.

In addition to taking good photos, we must put them somewhere where we can work on them, share them and back them up for safe keeping.

Some of the applications that will be covered include Windows Photos, Google Photos, Apple native Photos App and more.

### My number one suggestion

If you have an iPhone and an iPad, take photos and videos with your iPhone and edit them on your iPad. If you turn on the iCloud Photo Library on both devices, photos and videos that you take on one device will show up on the other device. The reasons for this are as follows:

1. The iPhone has a better camera
2. The iPad larger screen makes editing easier

### What should you bring to class?

- Bring a flash drive to class – any size.
- Sign up for a free Gmail Account even if you don't plan to use it. Go to [www.gmail.com](http://www.gmail.com) This will allow you to use Google Drive and Google Photos for free.
- Feel free to bring anything that is photo related to class if you have any questions.

### Typical photo tasks

Here is a list to get started but it is in no means all inclusive.

1. Taking and editing photos
2. Sharing photos
3. Managing our iPhone and iPad Photo storage
4. Printing
5. Adjusting an image
6. Cropping, Rotating, Changing Aspect Ratio and Resizing
7. Removing artifacts
8. Creating Vignettes
9. Creating Collages
10. Creating Slide shows
11. Adding text
12. Move or Transfer photos from device to device (import and export)

- 13. Cataloging your photos
- 14. Backing up your photos
- 15. Locating Apps and software
- 16. Create HDR image
- 17. Scan old photos

### Typical video tasks

- 1. Combine clips or videos
- 2. Add still photos
  - a. Vary the length and Kers Burns effects
- 3. Trim or split clips
- 4. Add a theme
- 5. Use theme music or your own music
- 6. Add a Location (map) title
- 7. Modify transitions between clips
- 8. Crop and rotate clips
- 9. Fade audio in and out
- 10. Record live audio
- 11. Share video
- 12. Transfer and backing up an iMovie project to iTunes

### What can our cameras do?

This assumes you're using the built-in camera. 3<sup>rd</sup> party apps can do more

| Feature             | iPhone | iPad | Digital Camera |
|---------------------|--------|------|----------------|
| Normal Photos       | Y      | Y    | Y              |
| Live Photo          | Y      | Y    | N/A            |
| Time-lapse          | Y      |      | Maybe          |
| Slow-motion         | Y      |      | Maybe          |
| Burst               | Y      | Y    | Y              |
| Bracketed exposures |        |      | Y              |

|                   |   |   |   |
|-------------------|---|---|---|
| Panorama          | Y | Y | Y |
| Videos            | Y | Y | Y |
| Self-timer        | Y | Y | Y |
| Portrait Lighting | Y |   |   |
| Square photo      | Y | Y |   |
| Flash             | Y | Y | Y |

### What are these camera modes?

- Live Photo – see the info [here](#) .
- Slow-motion versus Time-lapse - Slow-motion records at a high speed and plays back slowly. Time-lapse records at a slow speed and plays back quickly. Just the opposite.
- Self-timer. In this mode the camera captures 10 photos allowing you to choose the one to keep.
- Portrait Lighting – this is a special on certain recent cameras, namely the iPhone 8+ and the iPhone X.
- Bracketed exposures are a series of photos taken with different exposure levels. These can be combined later in special software to increase the dynamic range. A 3<sup>rd</sup> party app for mobile devices is required.

### Looking for an App on your mobile device or PC

- Using the App store – see the info [here](#).

### Some Terminology

1. Brightness versus Contrast
  - a. Adjusting brightness simply brightens the entire image from the shadows to the highlights equally.
  - b. Increasing contrast results in increasing the difference between dark and bright areas, making shadows darker and highlights brighter.
  - c. Decreasing contrast brings the shadows up and the highlights down to make them closer to one another.
2. Aspect Ratio

- a. This is the ratio between the height and width of an image. Common examples are 5X7, 8X10.
3. Resolution
  - a. This is the number of pixels in an image. For example, some iPhones take 12-megapixel images that are 4032 by 3024 pixels. This results in an image that has an aspect ratio of 4:3 or 8:6.
4. HDR or High Dynamic Range
  - a. The iPhone camera has an HDR mode where an image exposed for the brightest scene is blended with an image exposed for the darkest scene to expand the dynamic range of number of brightness levels.
5. Glossary of photography terms – see the info [here](#)

## Other free programs

1. iPhone and iPad Exif Wizard for viewing Metadata– see info [here](#)

## Android devices

The information on these devices will not be as extensive as on Apple devices. The info below assumes that you have installed the Google Photos App on your device Here are my recommendations:

1. For tips on using the camera see the info [here](#)
2. Use a Micro SD card for storing your photos and videos
3. Transfer photos to your PC – here are several methods
  - a. Install the free Syncios program on your PC to easily transfer photos and videos to your PC. See how to use it [here](#).
  - b. Follow the info [here](#) to use the Google Photos App to download photos
  - c. To use the Windows File Explorer, see the info [here](#)
4. If you delete a photo from the Gallery App, it remains in the Google Photos App
5. If you delete a photo from the Google Photos App, it's deleted from the Gallery App also
6. The best App for photo editing is Snapseed

## File Types

- Most digital cameras – JPG, Raw
- iPhone 6/7/8 – JPG, HEIC

- 3<sup>rd</sup> Party iPhone Apps – TIFF, Raw

Average size by file type

| Type               | TIFF | TIFF-M | Raw (DNG) | JPG | JPG-M | HEIC |
|--------------------|------|--------|-----------|-----|-------|------|
| Size in Mega Bytes | 46   | 15     | 11        | 9   | 3     | 1.6  |

Notes:

1. Only 3<sup>rd</sup> party Apps can shoot in TIFF, Raw, JPG-M
2. The iPhone can shoot in JPG only except for newer iPhones which can save either JPG or HEIC (one or the other). Go to Settings, Camera, Formats. The Most Compatible is JPG and the High Efficient is HEIC.
3. The CameraPixels App can shoot the TIFF, TIFF-M and JPG-M file types. The -M are smaller versions or more compressed.
4. For a description metadata or EXIF data of see the info [here](#)

So, what does all this mean? Either the JPG or HEIC file types are all you need unless you are an expert and want very high-resolution photos. Recent iPhone models shoot 12 mega pixel images which are suitable for printing up to 14 X 9 prints. See the info [here](#).

#### New HEIC format on some iPhone models

- See the information [here](#)
- HEIC Converter [here](#)

#### Snapseed can edit RAW photos

- The iPhone and iPad Camera App cannot take Raw photos but many 3<sup>rd</sup> party apps can. The ProCam camera app can shoot in the RAW format. See more info [here](#). For help on this app see info [here](#).

#### List of cameras apps by special feature.

- Click on the name in the table for information.
- **My favorite camera app is ProCamera by far, it's worth the price in you want more features than the iPhone native camera has.**

| <b>Special Feature</b> | <b>App</b>  | <b>Price</b> |
|------------------------|---|--------------|
| Low noise in low light | <a href="#">Average Camera Pro</a>                      | \$0.99       |
| Bracketing             | <a href="#">Camera Pixels</a>                           | \$3.99       |
| Built in editor        | <a href="#">Camera+</a>                                 | \$2.99       |
| Shoot in Raw format    | <a href="#">Camera+</a>                                 | \$2.99       |
| Macro                  | <a href="#">Camera+</a> see help <a href="#">here</a>   | \$2.99       |
| HDR                    | iOS camera app,   | Free         |
| Convert to sketch      | <a href="#">Pro HDR X</a>                               | \$1.99       |
| HDR                    | <a href="#">Pro HDR X</a>                               | \$1.99       |
| Bracketing             | <a href="#">ProCam</a>                                  | \$4.99       |
| Focus Peaking          | <a href="#">ProCam</a>                                  | \$4.99       |
| Light Trails           | <a href="#">ProCam</a>                                  | \$4.99       |
| Shoot in Raw format    | <a href="#">ProCam</a>                                  | \$4.99       |
| Slow Shutter           | <a href="#">ProCam</a>                                  | \$4.99       |
| Slow Shutter           | <a href="#">Camera+</a>                                 | \$2.99       |
| Slow Shutter           | <a href="#">Slow Shutter Cam</a>                        | \$1.99       |
| Built in editor        | <a href="#">ProCamera</a> see help <a href="#">here</a> | \$4.99       |
| HDR                    | <a href="#">ProCamera</a> see help <a href="#">here</a> | \$4.99       |
| Intervalometer         | <a href="#">ProCamera</a> see help <a href="#">here</a> | \$4.99       |
| Shoot in Raw format    | <a href="#">ProCamera</a> see help <a href="#">here</a> | \$4.99       |
| Bracketing             | <a href="#">PureShot</a>                                | \$2.99       |
| Shoot in Raw format    | <a href="#">PureShot</a>                                | \$2.99       |

| Special Feature     | App                      | Price  |
|---------------------|--------------------------|--------|
| Shoot in Raw format | <a href="#">PureShot</a> | \$2.99 |

### List of apps by special feature.

- Click on the name in the table for information.

| Special Feature    | App   | Price  |
|--------------------|---|--------|
| Great photo editor | <a href="#">Enlight</a> see help <a href="#">here</a> | \$3.99 |
| EXIF viewer        | <a href="#">Exif Viewer</a>                           | \$2.99 |
| Remove GPS data    | <a href="#">OneEdit Pro</a>                           | \$2.99 |
| EXIF viewer        | <a href="#">Photo Investigator</a>                    | \$2.99 |
| EXIF viewer        | <a href="#">View Exif</a>                             | \$0.99 |
| EXIF Viewer        | <a href="#">EXIF Wizard</a>                           | Free   |

### Resources

Free tutorials at [www.lynda.com](http://www.lynda.com). See the instructions on how to log in [here](#). We will watch some of these videos in class.

Free tutorials at <https://iphonephotographyschool.com/>.