Making 3D instructional videos using Go Pro Cameras

Required Equipment - All available to loan from MacD209:

- 2 Go Pro Cameras
- Dual HERO System (Case, Synch Cable, Mounting Hardware)
- Tripod
- 3D Glasses (Red/Cyan or Virtual Reality viewing goggles)
- Two devices capable of using Go Pro’s remote mobile iOS/Android application Capture
- Go Pro Studio software (free)

**Step 1: Connecting Go Pro’s to mobile device**

If the devices you are using do not already have the Capture app on them, put it on via the Apple/Android store. Look for the icon on the right.

Instructions on how to synch the Go Pros to a device are on the Faculty of Education’s webpage under the tab titled **Using The Go Pro App**. You must follow the instructions for each GoPro on two separate devices. All of the required passwords are on there as well. [http://www.uvic.ca/education/home/home/labs/resources/resources-goprohelp.php](http://www.uvic.ca/education/home/home/labs/resources/resources-goprohelp.php)

You may have noticed that the Go Pros do not have a screen like a regular camera, this is why we must synch it to the app so we can actually see what we will be recording. Remember, you need to synch each camera to its own device, this is so you can press play/stop while the cameras are closed up in the dual housing system.

**Step 2: Flipping the recording mode on one Go Pro**

The dual case holds the two GoPros side by side to mimic how two human eyes would see. One Go Pro is positioned upside down in the case so that the camera lenses can be close together. This means that the camera positioned on the left must be flipped to record upside down, so that both cameras are recording the same direction. This can be easily done in the Go Pro app.
Select the settings button - Scroll down to Setup, select auto rotation - Select Down

The camera will now be set to record upside down.
Step 3: Putting cameras into the dual housing case

Gather the equipment pictured below:

![GoPro Cameras and Dual Housing Case](image)

Note: Before you put the GoPros inside the case, make sure they are turned on, both synched to an app, have the memory card inserted, and one camera has be set to record upside-down.

Follow this link to watch the installation video: [https://youtu.be/ZXbbSEh0bhA](https://youtu.be/ZXbbSEh0bhA)

Step 4: Setting up the recording scene

The way you set up your scene for your video will vary based on what it is you are recording, but there are a few general elements to keep in mind:

1. Background

Try to make the area you are recording clear of unnecessary clutter. If possible, record against a white or plain colored surface. You could also set up a large piece of fabric or paper behind the demonstration. Consider what will be in the shot in general. If you are aiming the camera towards a window, everything going on outside the window will be included in your video. If you are pointing the camera at the floor, try and have some plain newsprint of fabric underneath your set up. The video will turn out most effective when the focus point is set on what you are making a tutorial of.

2. Lighting

Having successful lighting in your video can help make it look more professional and make the 3D effect more successful. Try to avoid having intense shadows on object by providing lighting from two
to three different directions. A simple lighting set up could be to have your scene beside the window, the lights in the room turned on, and one additional light on the opposite side of the window.

Any lighting you have available can be made to work similar to the above diagram. Even light sources like desk lamps will work’ just do some experimenting to try and eliminate any harsh shadows.

3. Positioning of the camera

Your two GoPros, installed in the dual housing case, will need to be mounted onto a tripod. It is important to consider the angle you wish to film at. You could have the cameras positioned behind you so that the viewer is seeing the demonstration from your point of view. Alternatively you could point the camera at your demonstration from the side or front. It all depends on what kind of visuals you want your viewer to get out of the recording. Consider if where the camera is placed will be convenient for you, you do not want it to be obstructing your ability to move around and demonstrate properly.
**Step 5: Recording Your Demonstration**

Recording on the GoPros is made very easy when connected to the *Capture* app. Simply press the red button on both cameras to begin. It is important to press both buttons simultaneously. This allows for each cameras recording to be identical in length, which is crucial for when converting to 3D.

Try a few test recordings before you begin your actual one. To see the video/photo gallery click on the grid shaped icon. Make sure the GoPro is recording all the right parts of your demonstration. It is okay to have the shot include more area than you need, as you can easily crop the videos in the GoPro Studio software.

*Note: The footage may look low quality or blurry when replaying it on the app, this is only to optimize viewing on your device and does not reflect the quality of the actual footage when you view it on a computer.*
Step 6: Putting your clips on the computer

Remove your cameras from the dual housing case; remember which camera was on the left and which on the right.

Plug in the first camera using the provided cable. Create two new folders called something like Left and Right. Using an application called Image Capture (comes with all Macs), import your footage to the desktop and drag it to the corresponding folder. These separate folders will make it easier for finding your files while editing.

Step 7: Editing and Exporting

Editing - Putting your videos into GoPro Studio, GoPro’s free editing software, and making them into 3D is very straightforward.

The following video provides the easiest visual explanation: https://youtu.be/2Q_OHvep6tI

Exporting - You can choose between several different ways to export with GoPro Studio, but the methods to focus on for 3D are called Anaglyph(Red/Cyan) or Side-by-side.
The above video tutorial focuses on exporting to Red/Cyan because those are compatible with the style of 3D glasses that come with the GoPro. They are the classic style of glasses with one red lens and one blue lens.

The process is similar for exporting for YouTube3D - which can be viewed using a mobile device in a Virtual Reality (VR) headset. We have VR headsets available to loan at MacD209.