



# Creating a Video from In-Class Presentations

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## Equipment Needed:

- Sony HXR-NX3/1 Camcorder
- Manfrotto Tripod System MVH502A Fluid Head and 546B Tripod
- Zoom H4N Audio Recorder
- Sennheiser Wireless Microphone Set XSW-D (handheld)
- 3-pin XLR Male to Female Cable
- Extension Cord and Surge Protector
- Auray Microphone Stand

# Recording Setup

The setup will vary greatly depending on the space you are filming in, but you may use this setup as a general guide.

## Camera Setup:

Setup the Sony HXR-NX3/1 Camcorder on the Manfrotto tripod in an area where you have a clear, unobstructed line of sight to the presenters. The best practice would be to use the AC adapter to power the camcorder, as opposed to relying on battery power. Thus you will need to locate a nearby outlet or make use of an extension cord and surge protector to span the distance as needed. Depending on the length of presentations you are recording, battery power may be fine. For anything longer than 2 hours, it is much safer to just use the AC adapter to avoid risk of loss of power.



For the video, set the zoom such that you leave some head space for the presenters, but frame them well. A good guide is typically from the midriff up works well. If there are multiple presenters, you may want to use the fluid head to pan along all of them during the presentation. The lighting conditions in the room will greatly impact what settings are viable to be used, as it is highly preferred to avoid setting the gain to medium or high, as that results in grainy video. Set the aperture as small as feasible without having underexposed video, preferably somewhere in the f/8 range. This is to ensure that you have everything in focus and do not have to adjust focus if you pan the camera around or if people are not standing in the same plane from the camera.



## Audio Setup:

For audio, the camera will already come with the attached shotgun mic connected to one of the XLR inputs. Make sure that the corresponding input is set to +48v, as the shotgun mic needs phantom power. In the second XLR input slot, I connected the Sennheiser XSW-D wireless receiver, which can be mounted on the hotshoe at the front of the camera. As the XSW-D is independently powered, it does not need to be set to +48v.



For the microphone side of the XSW-D, set it up on the microphone stand near the presenters and point it at them. Depending on the constraints of the room, you may have to get creative with its positioning. Make sure that the transmitter is plugged into the mic and both it and the receiver on the camera are turned on.

If set up correctly, you will see the audio monitor levels on the camcorder reading differently for the left and right channels, and if you plug headphones in to the camcorder you will notice that the left and right ear will sound slightly different. This is because the camcorder is recording each microphone input in one of the two channels. I recommend this setup as it allows for additional redundancy in audio recording and gives different options to choose from based on what sounds best.



Additionally, if you are recording in a room set up for dual delivery classes, there will be microphones already set up that you may want to use to record audio. In this case, locate the audio interface in the room and find the XLR cable that leads out to the monitor speakers. Unplug the end from the speakers, and attach it to a Zoom H4N, making sure that you have pushed the button to switch from using the internal mics to using the XLR inputs to record. If the bottom two red LEDs are lit up, it is set up correctly. Press the record button once to monitor audio levels, and adjust the recording levels by using the +/- buttons on the right side of the H4N. When you are ready to record, press the record button again and you will see the timer begin to count up. It should now be recording from the room's microphones.



## Screen Capture Setup:

To record the slides/computer portion of the presentation, the two best options are to screen record with either OBS or Zoom. OBS will result in higher quality overall, but does require additional setup. Zoom is likely already installed on whatever computer is being used, and is more familiar.

If using OBS, under the sources section, click on the + button and select **Display Capture**. Click **Ok** on the popup window, and select the new **Display Capture** as your source. In OBS you should see a preview of the computer's display now. At this point, all that is needed is to hit the **Start Recording** button on the right side of OBS. It will automatically save recordings into a designated movies file path which it will display at the bottom of the window when you stop your recording.

If using Zoom, start a meeting and begin screensharing. Hit the **Record Meeting** button once you've done so. The videos will either save locally on the computer or to the user's cloud depending on their Zoom settings.

At this point, it is just a matter of beginning to record the presentations. Start the camera, Zoom H4N, and screen capture recordings.



## Editing

Once you have your footage and recorded audio, I highly recommend editing it all together in Adobe Premiere Pro. Premiere Pro has a number of features that will make the workflow easier than attempting to do so in iMovie or Final Cut Pro. For assistance with using Premiere Pro, reference our written guides or the recorded short course on the DMC's YouTube page. We also frequently offer short courses on Premiere Pro.

One specific tip for Premiere Pro that I want to add is with regards to the audio we have recorded with the camcorder. The left and right tracks of the audio are recorded from different microphones for the sake of having variety of choice. If one of them turns out to be your desired audio track for the presentation, you can set both audio channels to the same audio source by right clicking on the clip in your timeline and selecting **Audio Channels...** The popup window will have check boxes for each channel and audio source, and you can set both channels to your desired source.