What is Video

- A series of pictures
- Multiple exposures per second with sound
- The number of exposures is called the “Frame Rate”

24P, 30P, 60P
What is Video

1080
vs
720

1080 = 2x resolution of 720
Recommendation

Shoot @ 1080, 24P
Before You Start!

- Reset the camera!!!!
  - You don’t know who had it last or how they set it.

- Set Dial setting to M - Manual
  - Always shoot in Manual
  * 60D is set to the video icon

- Double check your resolution and frame rate
Exposure

- **Aperture**
  - Opening of the lens iris

- **Shutter Speed**
  - Length of exposure

- **ISO**
  - Sensitivity of Sensor
Exposure

“STOP”

- **F Stop**
  - Measurement of Aperture
  - 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22...
  - Full stop = 2x or 1/2 as much light

- **ISO**
  - 100, 200, 400, 800, 1600
  - Same relationship as F stops

- **Shutter Speed**
  - 1/50, 1/100, 1/200
  - Double and half again
  - Affects look of motion

When exposure value increases by 2x or decreases by 1/2 it is called a “stop” whether it’s aperture, ISO or shutter speed.
Exposure

- **F Stop**
  - Lower F number = Wider opening
  - Wider opening = Shallower “Depth Of Field”
    - How much of frame is in or out of focus
  - DOF can be compressed with “Long” Lens

Smaller Number = Less in focus
Higher Number = More in focus
Focal Length

- Expressed in millimeters (mm)
- Higher number = Zoomed in more
- Softens background at higher F stop
- Lower Number = wider field of view
Lenses

Maximum Aperture
- Widest that a lens can open
- Lowest possible F stop
- “Fast” lenses
Lenses

- Lens Identified by Focal length f/#
  - 35mm f/1.4
  - 70-200mm f/2.8
  - 50mm f/1.2
Lenses

- Two different sized sensors
  - Full Frame
  - APS C
    - 60% Smaller
    - Creates 1.6x magnification

Full Frame: 100mm = 100mm
APS C: 100mm = 160mm

Full Frame = 5D Mark III
APS-C = 7D, 60D
Exposure

Setting Aperture
- Use dial on back of camera
- View value in LCD on top of camera
Exposure

- **Shutter Speed**
  - High speeds = choppy look
  - Slow speeds = blurry look
  - 2x Frame Rate is ideal
Frame Rate

- Number of images taken per second
  - Affects “Temporal Motion”
  - Higher speeds look more fluid
    - Better for slowing down fast motion (slo-mo)
  - Lower Speeds look more “Filmic”

24P, 30P 60P
Shutter Speed

- High speeds = choppy look
- Slow speeds = blurry look
- 2x Frame Rate is ideal

BUT!!!!

- SLR speeds don’t work that way. :-(
  - 24P - 1/40 or 1/50
  - 30P - 1/40 or 1/50
  - 60P - 1/60 or 1/120

Setting Shutter

- Use top dial to adjust setting
- View value on top screen
ISO Speed
- Higher number = less light needed for exposure
- Higher ISO = more “noise”

- Multiples of 16, 8 and 4 work best.
  - 160 has less noise than 100
  - 160, 320, 400, 640, 800, etc
Exposure

Shutter Speed

- Setting ISO
  - Press ISO button on top
  - Use top dial to adjust setting
  - Values also displayed on rear LCD
Shutter Speed

Focusing

- Use Manual Focus
  - Make sure lens ring is set to M
  - USE MAGNIFICATION TO CHECK FOCUS
  - You can use AF button in a bind
  - Not traditional video auto focus
    - DO NOT USE WHEN ROLLING

Eyes are the most important thing to keep in focus!
Shutter Speed

- 7D, 60D, 5D Mark III
  - Start Stop Button on back
Audio

- Record on a separate device if you can
  - Use on board audio as “scratch” audio
  - Synch during editing

- DO NOT use on camera microphone
  - Picks up sound of camera operation

- Mini input on camera + manual audio gain
Recap

- ALWAYS RESET CAMERA
- ALWAYS SET CAMERA TO MANUAL
- ALWAYS FOCUS MANUALLY
- SHOOT AT 1080 24P - recommended
- SET SHUTTER AS CLOSE TO 2X FRAME RATE AS POSSIBLE
- USE OFF BOARD AUDIO IF POSSIBLE
- USE EXTERNAL MIC IF RECORDING AUDIO ON CAMERA
ONE LAST PIECE OF ADVICE

Do not move the camera for no reason!

- Use a tripod or mono pod
  - Do not shoot hand held unless you absolutely must
  - “Rolling Shutter” makes your shots look wobbly

- Pan and tilt slowly
  - Roller shutter effect visible with any camera movement

Ask yourself “What is my motivation for doing a camera movement?”

If you can’t answer that quickly and decisively, DO NOT move the camera.