Montgomery Media Arts Institute

Equipment List

The following list isn't comprehensive (there are many options and varying budgets) but is a list of more affordable, tried and true equipment you can use for podcasting in the classroom.

Recording Devices

Tascam and *Zoom* are popular brand handheld recorders. Here are a few to consider:

($120) *Zoom H1n:* A pretty good, cheap, and easy to use recording device with built in mics that work quite well. You can read more about it on the link. The only caveat we have is that the dial towards the top can easily turn while recording and if you inadvertently knock it to zero, your recording is silent ;(Listening on headphones while recording prevents this but some circumstances preclude this option.
($120) *Tascam DR 07X*
($200) *Zoom H4n:* This is an industry standard and satisfies most podcasters' needs.

Microphones
*make sure you have a windscreen for whatever microphone you are using
*wear headphones or at least earbuds to monitor your audio while recording

Lavaliers
($80) *Rode SmartLav Condenser Mic for Smartphones*: We love this easy to use, durable and decent lavalier mic that is compatible with Apple and Android smartphones. However, if you want to plug it into a camera, or another handheld recording device with an external mic jack, you will need to buy the Rode SC3 adapter. *You will need two if you want to record yourself as well

($600) *Sennheiser Wireless Omni Lavalier*: Sturdy, with broadcast quality sound. An industry standard. Important to note that wireless mics usually work, but require synching frequencies and that can prove tedious at times. But this mic does mount to a camera too.

USB Condenser Mics
($90-$130) Condenser Mics: *Blue Yeti* or *Blue Snowball*
Great for narration. These are USB mics that plug right into any Mac or Windows computer with a USB port. You can create an audio bay in a small room (closet!) with one of these very durable mics hooked up to one computer, where the students circulate in and narrate their podcasts. Both mics come with a table stand, but investing in an arm stand is handy. Which one to buy? Here is a site that does a good comparison of the two mics. :https://whyvideoisgreat.com/blue-snowball-vs-blue-yeti

XLR Condenser Mic
($99) *Audio-Technica AT2020*: This XLR (three-prong cord) microphone is excellent at capturing vocals and pulling out the unwanted noise. It's very easy to set up, record, and mix. It will come especially handy for videos, podcasts, and anything that requires speaking.

Shotgun Mic
($300) *Rode VideoMic Pro*: This shotgun mic can capture sound from a subject a ways away (it depends on the environment) if you point it in the direction of the voice.. It is a fairly low cost broadcast quality mic. It is battery powered (so is independently powered from your audio recording device which is good). It requires, however, a 9 volt battery that is said to last 70 hours, but have another one with you at all times. And it picks up some movement noise so be careful if you need to set it down on a table or move it around. You will hear that movement likely in the recording.

Editing Software

All of the software listed below is perfectly suited to create podcasts. *Adobe Audition* is an industry standard and you will need access to the *Adobe Creative Cloud* to access it.

GarageBand (Free Software that comes with Macs)
Audacity (Free Software; Mac or Windows compatible)
Adobe Audition (Compatible with Mac or Windows; comes with creative cloud package)
($60) Reaper: Windows and Mac compatible. A school Reaper license is $60 but they seem to have a long “still evaluating” period where you can run this program for free. This is a very user-friendly and professional quality software that surpasses Audacity and GarageBand but is a one-time purchase so cheaper than the subscription to Audition.
($90-$375) *Hindenburg Journalist (Pro)*: Windows and Mac compatible. They pride themselves on being user-friendly and cross-platform (for example you can interview someone on Skype and record right onto a track in Hindenburg to then quickly edit). They have easy to follow tutorials on their site as well.

File Converters

The timesaver/ lifesaver. Sometimes, when you import a file into your editing software, the software doesn’t like the file type. You might have downloaded an awesome sound effect from one of the copyright free sites or your friend sent you an interview they did in a file type your software doesn’t

recognize. Or you might want to pull just the audio from a video file. A file converter at your fingertips is an invaluable timesaver. Here are some options:

Switch: Mac only. Free and super easy and dependable.
Handbrake: Windows or Mac compatible. Open Source, so free, converter that is easy to use and dependable.

Tips
- Check and Charge all your equipment before using; and always bring your chargers and extra batteries.
- Watch a few youtube videos on how best to use your equipment.
- If possible, bring back-up equipment and record the session with two different recorders (a phone with a lavalier and a handheld recorder with a shotgun mic for example)
- If your recording device uses SD cards you will need a reader or a computer with an SD card reader to transfer the data.

Filmmaking Equipment Suggestions

Classroom Equipment Recommendations
*This list is meant to guide you, though you will still need to decide what is best for you. There is no "blanket best" as everyone is working with different budgets and computer equipment. This equipment list is linked to sellers, but we suggest shopping around and exploring educational pricing discounts. **Check out this *Filmmaking Go Kit* if you want everything to fit in one tidy, mobile case. (Total cost of Go Kit including case is about $1200)**

Video Cameras

This website allows you to make direct comparisons between different cameras:
http://snapsort.com/compare

Overview (what to look for):

- External Mic Option: If at all possible, choose a camera with an external mic option. Even if you currently don't have access to an external mic, it will provide you and your students room to grow.
- Sensors: Two major types of sensor: CMOS better than CCD (CCD runs hot). CMOS is a cooler running chip. The larger the sensor the better and the more sensors a camera has the better. Most have one but some have more than one.
- Shoots Stills:Good feature if the video camera also shoots stills. Look at the megapixels, which refer to the quality of still photos (nothing to do with the video). 16 megapixels is good.

- Optical Zoom: Never buy a camera based on digital zoom- but look at optical zoom- range is 8x to 30x – try to get a camera with at least 15x allowing you to get shots that look closer to the action wherever you are. Great for when you are a significant distance from your subjects.
- Extra Lenses:If you are adding lenses to your arsenal, a telephoto lens and/or macro lens might be the priority, but look at reviews before choosing a lens. Some cheap telephoto lenses have trouble focusing.

Video Cameras WITH External Mic Option

($50) *Besteker Portable Digital Video Camcorder*

($299) *Canon Vixia HF R700 Full HD Camcorder*

SmartPhones and Tablets (Free)
Older iPhones and iPads and Androids are often collecting dust and can serve classrooms as pretty high-end cameras. Access these abandoned resources and invest instead in tripods, mounts and external mics to enhance production (see mobile device section below).

HDSLR (aka VDSLR)
Not built as a video camera but have video capacity and there are add-on improvisations that make shooting video with these easier. (You can make a lot of these improvisations on the cheap yourself if you Google DIY DSLR add-ons) These cameras are great in low light (have big sensors) and are high definition, but cost more.

($500) *Nikon D5200 DSLR* w/lens

($649) *Canon EOS Rebel T3i DSLR Camera with EF-S 18-55mm IS II Lens Kit*

($600) *Nikon D3400 DSLR Camera Kit with Nikon 18-55mm and 70-300mm VR Lens*

Video Cameras with NO External Mic Option (handycams)

($300) *Panasonic HC-W570* (Wi-Fi Connectivity) This camera even has a picture-in-picture feature and a baby monitor!

($300) *Sony HDR-CX440* (Wi-Fi Connectivity)

Tripods

($30) *Sony VCT-R100*: Compact Tripod with 3-Way Pan/Tilt Head. Lightweight and sturdy but no quick release. Great tripod for money.

($17) *Sunpak 620-020*: Decent but joints a little sticky when panning and tilting

($140) *Manfrotto MK290*: Durable and smooth for filming

($50) *Magnus VT-100 Tripod with 2-Way Pan Head*

Joby Gorillapod Mini Tripods

External Microphones

Many microphones don't work well with the iPhone and iPad since the Apple microphone jack isn't the standard 3.5mm. Unless you purchase a microphone that is built compatible such as the Rode or the iRig listed below, you will need an adapter that goes into the iPhone and attaches to the microphone.

Scroll down on this website to choose the right adapter:
http://www.eatsuccess.com/5-cheap-wireless-lapel-microphone-for-iphone/

Lavaliers (also known as lapel or clip mics)

($79) *Rode Smartlav Lavalier*: Omnidirectional Microphone for iPhone, tablets
and smart phones. Really useful for documentary filmmakers, journalists, people doing interviews, recording speeches- compatible with Androids too.

($23) *Polsen Omnidirectional Lavalier Microphone*: These mics are great for interviews and enhancing sound during video production. The OLC-10 is cheap with a long cord and comes with a tie-clasp mount, battery, and windscreen. It is fitted with a 3.5mm plug.

($199) *Sennheiser Clip-Mic Digital*: Really cool professional microphone from Sennheiser that uses an Apple Lightning connector to plug into any iPhone prior to the iPhone 7. Record sound on your phone using the built in recording and pre-amps and monitor through your headphone jack. A mic clip, a metal windscreen, a foam windshield, and a carrying pouch are also included.

Handheld & Video External Mics

($59) *Rode VideoMic ME Directional Mic for Smartphones*: A compact and lightweight, high-quality directional microphone with that connects directly to the iPhone TRRS microphone/headphone socket. Its flexible mounting bracket accommodates a wide range of smartphones and allows the microphone to be fitted for primary camera or front camera ('selfie') use.

SHURE VP64A: Omni directional dynamic microphone- affordable and basic but high performing- XLR cord needed with a 3.5mm plug on one end. Very uniform sound pickup indoors or outdoors.

($30) *iRig microphone with Windscreen* : Compatible with Apple products only Handheld condenser microphone for the iPhone, iPod touch, and iPad. Perfect for interviews, podcasting and reporting, as well for vocalists and musicians- powered by iPhone, iPad- has a headphone jack for listening as you record. There is some feedback that the mic cables are not durable.

($150) *Rode VideoMic with Fuzzy Windjammer Kit*: Lightweight directional videomic with really good battery life. Great for interviews in noisy places. Does a great job of enhancing video audio while shooting from further away.

($55) *Polsen SCL-1075*: A camera mount condenser shotgun microphone that allows you to capture clear, natural audio with your DSLR or camcorder. Designed to reject ambient noise and focus on the subject in front of the microphone; great for recording interviews.

($60) *Samson Meteor USB Condenser Studio Mic:* USB connection plugs in and records right into any Mac or PC and comes with a nice tripod desk stand. Excellent for narrating (voiceovers); great sound for the price and one per classroom goes a long way.

Lighting

($45) *Aputure AL-M9 LED Lights*: These dimmable daylight-balanced LED lights are quite powerful for the price and come with filters to adjust color temperature and diffuse light. They thread either onto a light stand or mount to a DSLR or video camera. The built in Lithium Ion battery lasts almost 2 hours.

($69) *Yonguo LED Panel w/Battery*: Great little LED panel light for interviews, stop motion, etc.

($30)*Light Stands*: For white or green backdrops we suggest 3-point lighting. You might get away with using a reflector (instead of a third(fill) light). Choose between white, silver and gold reflectors – car shades are cheap and work great! Read this for more info on reflectors.

Backdrops

($108) *Impact Super Collapsible Background*: There are many options. This one is a little more expensive but easy to put up, has a strong outer frame that keeps it taut and is large enough for filming. They come in Chroma Green, White or Black– 8' x 16'.

Mobile Device Gadgets

($70) *Makayama Mounts for iPad Air/Pro*: A mount for iPads that allows you to attach a tripod for stable shots, pan and tilt movements, or when doing stop motion animation.

($70) *Makayama Mount for iPad Mini*
($15) iPhone 5 and 5S Tripod Mounts: Currently no option for newer iPhones

($20-$30) *Glif iPhone Mounts*: These are sure to be good quality. You can get many other brands for a lot cheaper and they will likely work okay - just read the online reviews for stability and quality of material.

(Starting at $20) *iStablizer Phone/Tablet Mounts and Tripods*

Hand Held Hollywood: This site explores how your iPhone, iPad and iPod Touch can aid in nearly every aspect of film and video production. From filmmaking apps and accessories to time-saving workflows, this is a destination for those wishing to discuss and discover the latest mobile techniques and technology.

($25) *Mixed External Lens Kit*: Includes Fisheye Lens, Macro Lens, Wide Angle Lens, Universal Clip, Lens Bracket, Lens Cap

Zacuto – Video Product Information and Store: Lens supports, Handgrips, Cables, and more.

($25) *Olloclip Camera Lenses*: For for the iPhone and iPad