



Photo major gear recommendations

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To properly participate in second-year photojournalism major courses at SAIT, you will need to outfit yourself with a basic pro photographer's kit. **This supplementary document introduces the benefits and drawbacks of adopting a mirrorless system in 2020** and, for those who elect to give mirrorless a try, outlines the recommended **SONY** gear.

***Note:** The following is meant to accompany the Canon or Nikon gear documents, each of which includes extensive additional information on the photo accessories, computer accessories and software licenses that will also be part of your second-year training.*

Gear summary

The following equipment, *at minimum*, is recommended:

- **One Sony α7 III, Sony α9 or Sony α9 II body**
- **One Sony wide-angle lens** with a maximum aperture of f/4 or larger. (A zoom lens is preferred, as is an f/2.8 maximum aperture)
- **One Sony 70-200mm zoom** with a maximum aperture of f/4 or larger. (An f/2.8 maximum aperture is recommended)
- **One Sony HVL-series flash for on-camera use**
- **Two portable flashes for off-camera use** in a location lighting setup
- **Wireless radio gear to control and trigger** two (or more) off-camera flashes
- **A starter light stand + light modifier kit** comprised of two stands, two umbrella swivels, two umbrellas and a carrying bag
- **One set of colour correction gels** for flash
- **One collapsible-type grey card** for setting a Custom WB
- **One tripod** that's rock-steady when extended to as much as 1.4 metres
- **One pro-quality handheld audio recorder** that includes a 3.5mm mic input jack
- **One lavalier mic** with a 3.5mm output plug

- **One photo backpack or other gear carrier** large enough to comfortably hold your camera system and SAIT-issued laptop
- **Four (minimum) or six (preferred) memory cards**, with a capacity of least 32GB each, and a card wallet to hold them (plus an additional external card reader if your camera takes memory cards not compatible with your SAIT-supplied reader)
- **One portable USB external hard drive or SSD** with a capacity of at least 2TB, for day-to-day storage of photos and video (both clips and projects)
- **One desktop USB external hard drive** with a minimum capacity of 6TB (8TB preferred), for archive storage of photos and video (clips and projects) at home
- **One memory card for your handheld audio recorder**, with a capacity of at least 16GB
- Licenses for **ChronoSync for Mac** and **Keyboard Maestro for Mac**
- Two textbooks: **Photojournalism: The Professionals' Approach, 6th or 7th Edition** and **Videojournalism: Multimedia Storytelling, 1st Edition** (both by Kenneth Kobré)

An iPhone is also strongly recommended, as there will be intensive (optional) instruction on the use of pro photography mobile apps that are exclusive to or simply much better on Apple's iOS operating system. (An iPad will work as an able substitute to an iPhone for all lessons, should you otherwise be committed to living an Android lifestyle.)

Is it time to go mirrorless?

Mirrorless cameras are the future of photography, across almost all usage segments. For the photographer who needs to work unobtrusively, and in tricky lighting environments, mirrorless offers the promise of a silent shutter, accurate exposure previews and sometimes-better autofocus (in certain scenarios that trip up digital SLR cameras now). These characteristics make mirrorless technology particularly attractive to photojournalists, at least if the camera lives up to the promise of the underlying technology.

Which is the problem today: **none of the mirrorless offerings from any of the major camera makers offers balanced performance.** Every single model we've tested, including the EOS R and EOS RP from Canon, Nikon's Z 6 and Z 7, Fujifilm's XT-3 and a bunch in Sony's lineup, have notable strengths but also significant weaknesses. These weaknesses can lead to pictures missed and photographer frustration.

The midrange and pro bodies in Canon's and Nikon's digital SLR lineup, by comparison, are less likely to disappoint. They might contain noisy mirrors, and lack exposure preview in the viewfinder, but they can do a lot of things well while inducing relatively few photographer headaches along the way. That's not the case with mirrorless, not as of this writing.

It's important, then, to tread carefully as you consider what system to select for the photo major, and for launching your photography career. At the outset of 2020, the overheated mirrorless hype glosses over **autofocus and general performance flaws that make the current full-frame and cropped sensor mirrorless models from Canon, Fujifilm and Nikon a not-great choice for the photographer in pursuit of fleeting moments.** When pandemonium happens in front of your lens, you will lose too many pictures to incorrect focus, messed-up compositions or moments not being recorded at all. That's the state of mirrorless at these three camera companies.

In our experience, **the only mirrorless cameras currently suitable for the photo major come from Sony.** There are limitations, to be sure, but they are somewhat easier to live with or work around than the limitations presented by mirrorless from the other brands. That will change in time. But it's true right now.

The most notable leap forward for Sony came in 2017, with the release of the full-frame-sensor α9. Followed soon by the α7R III and, in 2018, the α7 III, also sporting full-frame sensors. With these cameras, the functionality gap between Sony mirrorless and Canon's and Nikon's better digital SLR bodies narrowed to the point where Sony became a viable photo major option. Not the clear-cut winner, but a genuine option.

In Sony's lineup now, there are three bodies to consider: the α9, the α9 II and α7 III. The autofocus system in the α9, and its successor the α9 II, is incredible, mind-blowing, otherworldly and streets ahead of any other camera we've ever used. You can expect to make more perfectly in-focus pictures in more situations with greater ease than whatever you're shooting with now. It's that simple.

The α9 and α9 II are at the pinnacle of Sony's mirrorless lineup in performance, but also in price. Each is a tremendous camera for the money, but each is a heck of a lot of money for a student to spend on a body. As a result, the rest of this document assumes that the less costly α7 III, which is also a strong performer, even if it doesn't quite keep up to the α9 and α9 II, is the Sony to ponder for the photo major.

The α7 III is in fact the model in Sony's lineup that gives the best combination of performance, image quality and value. It has strengths and it has weaknesses, but when pitted against mirrorless bodies from other makers, including Canon and Nikon, the α7 III comes out on top. Great autofocus – second only to Sony's pricier flagships – is what sets the α7 III above its mirrorless competition.

When put beside Canon and Nikon digital SLRs, though, the α7 III wins a few and loses a few. Translated, this means **a mirrorless system assembled around the α7 III will be the way to go for some of you, but others will be smarter to stick with a digital SLR from Canon or Nikon.** It really depends on how you weigh the Sony's strengths against its weaknesses.

Therefore, before you immerse yourself ever deeper into the world of Canon or Nikon digital SLRs, you're encouraged to explore whether the upsides of Sony mirrorless, described ahead, might mesh well with your intentions for a career in photography. Here's a FAQ-style breakdown of our thoughts and recommendations.

Q. What are the advantages of a Sony mirrorless system based on the α7 III, vs Canon cameras like the EOS 5D Mark III and EOS 5D Mark IV or a Nikon camera like the D750?

The α7 III's single biggest advantage is its ability to shoot pictures silently, at up to 10 frames per second (fps), with tracking autofocus. For situations in which silence is golden – and there are plenty of them that you'll be trained for as a photo

major – being able to capture bursts of 24-megapixel photos, without making a sound, is fantastic. Whether you're shooting a dance performance or simply trying to be a fly on the wall, a camera that makes no noise will keep the attention off you. When this is useful it is REALLY useful.

Digital SLRs from Canon and Nikon have nothing comparable to Sony's silent-shooting mode, even when configured for mirrorless-ish live view operation.

Other advantages include:

Eye- and face-tracking autofocus that's so good and so usable that it has to be experienced to be believed. This translates to more pictures in focus, at least when the pictures have people in them. Neither Canon's nor Nikon's digital SLRs, which have subject-detection features as well, can keep up to Sony's Eye AF mode in particular.

Autofocus points that extend out to very near the edges of the frame. This provides a level of compositional and subject-tracking flexibility that Canon and Nikon digital SLR cameras can't match.

Shooting at up to 10 fps. The α7 III can capture more pictures in a given second than any current Canon or Nikon full-frame-sensor digital SLR short of the pricey EOS-1D X Mark II or D5.

Image stabilization with any lens. Several Sony mirrorless bodies, including the α7 III, incorporate image stabilization as part of the image sensor itself. This means that all lenses, even if they lack an image stabilization mechanism of their own, can get a measure of stabilization. This translates into fewer instances of blurred photos caused by camera shake. The benefit is especially noticeable and welcome with short telephoto lenses like the FE 85mm F1.8 and FE 85mm F1.4 GM.

Exposure preview in the viewfinder. The α7 III's electronic viewfinder provides a reasonably accurate preview of the exposure you'll get at the current shutter speed, aperture and ISO settings. This leads to better exposures throughout the shoot, especially when the light is tricky or ever-changing.

Picture review, and video playback, in the viewfinder. It can be difficult to see a camera's rear LCD in bright light, which in turn makes it hard to assess what you've just shot. Mirrorless cameras like the α 7 III solve that by providing the same playback functions when looking through the viewfinder as they do on the rear LCD.

Excellent picture quality. This is not a clear advantage of Sony, relative to Canon's and Nikon's digital SLRs, but it's worth noting that Sony can keep pace with the two more-established brands. Pictures taken with the Sony α 7 III look as good as those captured with the Nikon D750, and perhaps very slightly better at really high ISO settings. α 7 III files stand up well against those shot with the Canon 5D Mark III and 5D Mark IV as well, with the Sony model surpassing the low ISO image quality of the former and the high ISO image quality of the latter.

Put another way, the α 7 III can shoot pictures whose quality is, at minimum, equal to Canon and Nikon's full-frame-sensor cameras in the same approximate megapixel range.

A capable video mode. Higher-resolution video capture and the ability to keep moving subjects in focus while recording make the α 7 III a clear video-mode winner over Nikon's D750 (though the controls and configuration options of the D750 still make it an eminently usable video camera that can do what you need in the photo major) and Canon's 5D Mark III. The Canon 5D Mark IV offers slightly better autofocus than the α 7 III while recording video, but this Canon model's highest resolution recording settings compress the video in a manner that makes for overly big, slow-to-edit files.

Q. Wow, those are a lot of advantages. Are there any reasons not to go Sony?

Yes. The list of disadvantages is short, but potent. Together they represent significant shortcomings in most Sony mirrorless models available at the start of 2020, including the α 7 III:

Inferior body design and control layout. Sony is still learning how to design a camera body. As a result, the α 7 III is somewhat frustrating and fatiguing to use in quickly evolving situations, because most every button or dial needs to be refined, relocated or both. Also, despite its sweet autofocus capabilities, the α 7 III makes it

needlessly difficult to quickly and accurately change the active autofocus point from one location to another within the scene.

When compared to the body and controls of cameras like the D750 or 5D Mark IV, there is no comparison: Canon and Nikon know how to build a camera that enables quick and fluid autofocus, exposure and settings changes. Sony has a fair distance to go in this regard, despite the vast array of configuration options their cameras provide. This makes using a camera like the α7 III, at times, a less-than-pleasant experience that can lead to missed pictures. (The much-better control layouts of the new α9 II and α7R IV, though the price and/or features of each make them an unlikely photo major choice, reveal that Sony bodies in the future will be more photographer-friendly than the α7 III.)

An electronic viewfinder that, despite the exposure preview and image review advantages detailed earlier, is a step down from the optical viewfinders of Canon and Nikon digital SLRs. The clarity difference, in favour of optical, is one factor, but a secondary one. It's mainly about the ongoing babysitting of viewfinder brightness and exposure preview-related settings required as you go from shooting outdoors in sunlight to indoors in a dark room or you alternate between shooting with flash and shooting without. The A7 III doesn't do quite enough to manage how these things impact what you see through a viewfinder that's inextricably linked to the image sensor.

This is one reason you can expect to spend more time adjusting your camera's configuration from shoot to shoot than you would with a Canon or Nikon. And it will generally feel like you're having to spend too much time on the task.

Various quirks and limitations Sony's latest mirrorless cameras also demonstrate that the company has things to learn about how photographers work, both when shooting and when processing pictures. Here are two examples:

- RAW files shot with a Canon or Nikon digital SLR contain a full-resolution JPEG, which apps like Photo Mechanic can quickly display and zoom to allow for checking of focus. **Sony RAW files, produced by the α7 III and other Sony models, contain only a low-resolution JPEG that prevents quick zooming on the computer.** The only way to check focus when

reviewing Sony RAW files in your SAIT workflow, then, is to bring the RAW file into Camera Raw. This is inefficient, bothersome and leads to longer editing sessions.

- The Wi-Fi of most of Sony's current cameras is easy to configure and offers fast (for built-in wireless) transmit speeds, but is also clunkier to use and more difficult to integrate into a pro photographer's mobile workflow than the D750 (which is awesome in this regard) and the 5D Mark IV (which is pretty good too).

The biggest shortcoming? **The α7 III can't wirelessly transmit pictures in the background while you shoot.** This capability is both mandatory and also a standard part of Canon's and Nikon's Wi-Fi feature set for years.

Sony-brand E-mount (mirrorless) lenses are generally more expensive. The selling price of bread-and-butter lenses like the 24-105mm f/4, 24-70mm f/2.8, 70-200mm f/2.8 and 85mm f/1.8 tends to be higher than comparable Canon or Nikon digital SLR lenses. This is compounded by the fact there are fewer Sony mirrorless lenses available on the used market, though this is going to change in time, and there are fewer compatible lenses made for Sony by Sigma, Tamron and other third-party brands, though this is changing monthly.

Offsetting factors include the low price of the α7 III, given its full-frame sensor and impressive performance specifications, and the education deal you get on Sony camera equipment while enrolled in SAIT's journalism program.

Still, you're likely to spend more for pro-level Sony glass, and probably more for a photo major-suitable Sony kit overall, than for a Nikon D750-based system especially.

Recommended gear

Q. I've considered the advantages and disadvantages and I'm going to give Sony a try. What should I get?

You have a pioneering spirit!

Here's what we suggest as the core of your kit. For the camera itself, choose from either the affordable or the lottery winner option:

Camera body (affordable recommendation)

- **Sony α7 III body** (which includes one NP-FZ100 battery but no external charger)
- One extra **Sony NP-FZ100 Rechargeable Battery Pack**
- **Sony BC-QZ1 Battery Charger** (for NP-FZ100)

Camera body (lottery winner recommendation)

- **Sony α9 or α9 II body** (which includes one NP-FZ100 battery and an external BC-QZ1 charger)
- One extra **Sony NP-FZ100 Rechargeable Battery Pack**

Lenses and on-camera flash recommendations

The other recommendations are the same, regardless of which camera body you select:

- **Sony FE 24-105mm F4 G OSS** or Sigma 24-70mm f/2.8 DG DN Art for Sony
- **Sony FE 70-200mm F2.8 GM OSS** or Sony FE 70-200mm F4 G OSS
- **Sony HVL-43RM** or HVL-45RM external flash (for on-camera use)

If you'd like to purchase a telephoto lens with a really large maximum aperture as well, either of these lenses are fine options:

- **Sony FE 85mm F1.8** (this is a gem for the money)
- **Sigma 85mm F1.4 DG HSM Art** for Sony E-mount

When you're ready to add a large-maximum-aperture wide angle, consider:

- **Sony Distagon T* FE 35mm f/1.4 ZA** (a great and expensive lens)
- **Sigma 35mm F1.4 DG Art** for Sony

Portable flash options

For your location lighting and photojournalism courses, you really want to have a minimum of two portable flash units and the capability to adjust and trigger them remotely from the camera.

Because of compatibility problems that affect Sony's own flashes and the Strobepro/Godox wireless radio system we're otherwise recommending just ahead, the combo of items you'll need for your location lighting work will be different than for Canon or Nikon.

Specifically, you'll need one Sony-brand flash that's dedicated to on-camera use, plus two more non-Sony flashes that are expressly for off-camera use as part of your location lighting kit. **In other words, you'll want to get three flashes in total, two of which are dedicated to location lighting.**

For your pair of location lighting portable flashes, then, purchase **two units** from the following four options:

- Strobepro X60S/Godox TT685S powered by AAs
- Strobepro X60S Lithium/Godox V860IIS powered by an included rechargeable lithium pack **(the best overall value)**
- Godox V1S powered by an included rechargeable lithium pack
- Godox AD200 PRO powered by an included rechargeable lithium pack **(the best long-term purchase)**

Note: *If you opt for the AD200 PRO, there is one must-have accessory that you'll want to purchase at the same time as the flash itself: the Godox AD-S15 protector for this flash's barebulb head attachment. The metal cylindrical cover will keep the barebulb free of damage when it's attached to the flash body and being transported from place to place in a gear bag.*

Portable flash FAQ

Q. Why do Strobepro and Godox have the same flash lineup?

Godox, a Chinese maker of photography lighting equipment, sells its wares both under its own brand name and as the rebadged product of various retailers. One of those retailers is Calgary-based Strobepro, and there are many others in the U.S. and Europe especially.

Q. If Strobepro is really Godox, should I just buy gear that has the Godox name on it?

It doesn't really matter whether the gear is labeled Strobepro or Godox. What is important, though, is the warranty coverage, which happens at the retailer level with Godox. In this regard, Strobepro really shines, as they offer a two-year warranty, in-house repair (or replacement, as needed), free updating of flash and transmitter firmware for customers as well as competitive prices. Plus, they've been good to SAIT students, and to the photo major program, for some time.

The Camera Store – also a strong supporter of SAIT photojournalism for many years – stocks Godox too and is pushing to become a significant reseller of their product line. Like Strobepro, The Camera Store is offering a two-year warranty on Godox equipment bought from them. Talk to The Camera Store directly about their warranty and repair plan before deciding whether to shop for Godox equipment there or at Strobepro.

Note: *Don't buy Godox from a generic online source or you might end up with no warranty coverage at all.*

Q. The Strobepro X60S/Godox TT685S and the Strobepro X60S Lithium/Godox V860IIS appear to be identical, except that the former is powered by AAs while the latter runs from an included lithium pack. Have I got that right?

They are indeed the same overall flash, except for the power source. And the power source difference matters.

The AA version of this flash is less expensive and, if loaded with a set of the recommended batteries you'll read about ahead, you can expect decently quick

recycling times and plenty of flash bursts per charge. Plus, in a pinch, you can power the AA version with batteries bought from just about anywhere.

By comparison, the lithium version offers blazing recycle times for a flash of this type, many more flashes per charge and the ease of handling and recharging just one battery, which is included with the flash (as is its compact charger).

The AA batteries and AA chargers available in 2020 have never been better, plus there are multiple AA options that are well-suited to portable flash use. On balance, though, the noticeably increased performance and convenience of the lithium version is worth the extra money. Also, it's worth mentioning that the price difference is relatively small when the cost of rechargeable AAs and AA charger are factored into the purchase of the AA flash model.

Q. I see that the Strobepro X60M/Godox TT600 isn't on the recommended list. Why?

Because this flash lacks two features:

- The ability to have its zoom head position adjusted remotely, from the transmitter, which we deem to be an essential capability
- Updateable firmware, which means if a compatibility problem arises, as a result of troublesome code in the flash unit, there's potentially no way to solve it

Q. I also notice that the Strobepro X35S/Godox TT350S isn't among the recommended flashes. Why?

This model offers a ton of functionality for its small size and low cost. But, the Strobepro X35S/Godox TT350S's recycle time is too slow, its maximum brightness is not quite enough and its compatibility with various modifiers is too limited to be considered for your photo major location lighting kit.

Q. The Godox AD200 PRO is a nifty looking flash, but it's also a lot more expensive than the other recommended flashes. Do I get more if I spend more?

First, know that you'll be able to meet your location lighting needs in the photo major with a flash like the Strobepro X60S. It's not necessary to go up-market to complete your location lighting assignments.

That said, the AD200 PRO is superior in ways that you will find beneficial in the longer term. Briefly, its maximum brightness is much greater, recycle time for a given power level is much quicker, its ability to freeze moving subjects at still quite-bright output levels is impressive, it comes with a pair of detachable heads, one of which is optimum for use in large umbrellas and softboxes (and therefore better than a typical portable flash in this role) plus the optional (and extra cost) H200R round head and related range of light modifying accessories make this flash extremely versatile.

In short, the AD200 PRO is an incredible flash for its selling price, one that's purpose-built for the photographer on the move. Fully capitalizing on its advantages, though, might not regularly happen for you until you've completed the lighting-related learning in the photo major.

Note: *Godox also produces the AD200, an older version of the AD200 PRO. The earlier AD200 (also sold as the Strobepro X200) is really good too, but the improvements in the AD200 PRO make it the model to get, hands-down, even factoring in the higher cost of the PRO variant.*

Wireless triggering options

Support for both TTL and manual flash power control, as well as high-speed sync and rear curtain sync, is mandatory. As is the ability to rapidly change a remote flash's brightness levels and zoom head position. Plus, it needs to support the Strobepro/Godox flashes recommended earlier in this document. It must also trigger reliably.

The latest wireless radio triggering system made by Strobepro/Godox meets these criteria. The system is built inside the Strobepro/Godox flash units described earlier

in this document, which means they can be controlled and triggered by the transmitter that's at the heart of the system: the Strobepro XT Pro S/Godox XPro-S.

To control and trigger up to five groups of remotely placed flash units you must get one **Strobepro XT Pro S/Godox XPro-S transmitter**.

Q. The Strobepro XTS/Godox X1T-S transmitter is a bit cheaper. Can I get that one instead?

Don't do it. The Strobepro XTS/Godox X1T-S is poorly designed and frustrating to operate. Yuk.

Flash system recommendations

Q. Wow, I'm confused. Can you please just tell me what flashes and transmitter to buy for my location lighting kit?

Sure. This will give you everything you need for your location lighting assignments, without breaking the bank:

- **2 x Strobepro X60S Lithium/Godox V860IIS** portable flashes
- **1 x Strobepro XT Pro S/Godox XPro-S** transmitter

Reminder: local retailer Strobepro is the exclusive reseller of Strobepro products.

Everything else

See the Canon or Nikon gear requirements documents for details about the other items you're expected to have when you arrive on campus for your photo major year.