



2019-20 SAIT first-year journalism photography equipment requirements

To participate in first-year photo courses within SAIT's journalism program, you must outfit yourself with camera equipment suited to the shooting of news, sports and journalistic portraits at an introductory level. **This document outlines the gear required.** It was last updated on **Friday, June 7, 2019.**

Equipment summary

The following equipment, *at minimum*, is required. Specific model recommendations for certain items follow on subsequent pages.

- **One Canon or Nikon digital SLR** with a resolution of 16 megapixels or higher, decent image quality at higher ISO (light sensitivity) settings, a frame rate of at least 4 frames per second (fps), support for high speed flash sync, optical off-camera flash control plus video-capture capability
- **One Canon or Nikon wide angle-to-telephoto zoom lens**
- **One Canon or Nikon fixed focal length (non-zoom) lens** with a maximum aperture between f/1.4 and f/2.8
- **One Canon or Nikon external flash** with a tilt/swivel head, through-the-lens (TTL) flash exposure and off-camera control capability
- **One collapsible-type reflector** that's 22" or larger
- **One tripod** that's capable of being extended to at least 1.2 metres
- **One camera bag** large enough to comfortably hold the majority of your gear, even when a lens is attached to the camera body
- **Two 16GB or larger memory cards**
- **One portable hard drive** with a capacity of at least **2TB**
- **One lens cleaning cloth** and **one set of AA batteries** for your flash

Purchase the equipment listed above by Wednesday, September 11, 2019.

This textbook is required for your photo courses as well:

- ***Photojournalism: The Professionals' Approach, 7th Edition*** by Kenneth Kobré.

(You will need to purchase a handful of additional books for other courses in the journalism program. Those are not covered in this document.)

Finally, though not required for your first-year photo coursework, you will find it beneficial to have a handheld audio recorder for recording interviews. The recommended one is the **Zoom H1N Handy Recorder**, or the previous-generation H1. Both Zoom models capture professional-quality audio and will therefore also serve you well when your multimedia training starts in earnest during the program's second year.

You will be issued an Apple 13-inch MacBook at the beginning of the fall semester. It will be loaded with the software required for all your journalism courses, including photo. The use of the supplied Mac and its software is both mandatory and to your benefit, since doing so will enable you to properly complete all assignments as well as receive setup and troubleshooting assistance from SAIT's tech support staff and your instructors.

Equipment in detail

This section provides more information about the camera, lenses and some of the accessories required for journalism's first-year photo courses.

You are required to come equipped with a digital SLR camera. The camera body, lenses and flash must be made by either Canon or Nikon. These two companies are the dominant makers of camera equipment in the hands of professional photographers today, both have a service program for post-secondary photography students that dramatically shortens the turnaround time and lowers the cost on repairs, SAIT journalism's no-charge lens loaner pool (which you will have access to starting in the second semester) is comprised mainly of Canon and Nikon

gear and the majority of in-class lessons will be based around Canon and Nikon systems. **Plus, they make the most affordable camera equipment that's also capable of meeting the demands of first-year journalism.**

As a result, it's in your best interest to select gear from one of these two brands.

Note: *As of this writing, we can't recommend a mirrorless camera system for first-year use, from any of the major manufacturers, because none we've evaluated has the set of features needed to complete all first-year assignments well AND is also within the budget of first-year students.*

If your pockets are deeper, however, and you're considering the photojournalism major for the program's second year, then mirrorless becomes a viable option (though with stiff competition still from digital SLRs). Be sure to contact instructor Rob Galbraith if you have the means to afford more, are entering the program with the intention of specializing in photography and want to discuss a mirrorless purchase. (Contact information is at the end of this document.)

Digital SLR camera body options

The following current or recently discontinued digital SLR camera bodies are all able to record video, shoot at 4 fps or faster, produce pictures that are 16 megapixels or greater in resolution, deliver reasonable image quality at light sensitivities up to at least ISO 4000 and offer both high speed flash sync and optical off-camera flash triggering. As a result, they meet or exceed the program's minimum requirements:

Canon

Entry level: EOS Rebel T3i, T4i, T5i, T6i, T6s, T7i, 77D

Midrange: EOS 70D, 80D, 7D Mark II

Higher-end: 5D Mark III, 5D Mark IV, EOS-1D X, EOS-1D X Mark II (these cameras will require an extra-cost accessory to control an off-camera flash)

Nikon

Entry level: none

Midrange: D7100, D7200, D7500

Higher-end: D500, D610, D750, D4, D4S, D5 (some of these cameras will require an extra-cost accessory to control an off-camera flash)

If your budget dictates that you purchase an entry-level model, consider only cameras in Canon's Rebel series. Nikon's least-expensive digital SLRs, while fine cameras in many respects, are missing key flash features that you will be asked to use throughout your time in the SAIT journalism program, regardless of whether writing or photography is your main focus.

Once you reach the midrange of each makers' digital SLR lineup, however, things tip in Nikon's favour. The **Nikon D7500** and earlier **D7200** both meet or exceed all the minimum requirements, provide great value for the money and will enable you to shoot all your first-year assignments particularly well. **Canon's EOS 80D** is also a reasonable midrange choice, though it trails both the D7500 and D7200 in still-picture autofocus performance to a degree that makes Nikon the better bet of the two brands. Additionally, the D7500 produces better quality pictures in lower light conditions than either the D7200 or 80D.

In addition, the Nikon D7500, D7200 and Canon EOS 80D meet the minimum requirements for the program's second-year photojournalism stream, should you want to pursue that option. If you'd like to purchase gear that's *ideal* for second-year photo (as well as the first), get in touch with instructor Rob Galbraith ahead of your shopping trip.

The following current or recently discontinued camera bodies do NOT meet the minimum requirements specified above and must therefore be avoided:

Canon

EOS Rebel T3, T5, T6, T7, SL1, SL2 and SL3

Nikon

D3100, D3200, D3300, D3400, D3500, D5100, D5200, D5300, D5500, D5600

Note: *Even though the older Canon EOS 6D and current EOS 6D Mark II do meet most of the minimum requirements for the program, neither camera is recommended.*

Their combination of features, performance and price makes each model inferior to other options in both Canon's and Nikon's lineups.

Wide angle-to-telephoto zoom lens options

Most entry-level digital SLR cameras can be purchased in a bundle with an 18-55mm f/3.5-5.6 lens. While this will provide you with a wide angle-to-telephoto zoom, and this lens is minimally acceptable for use during the program's first year, both **its zoom range and its optical quality will limit the kind and quality of pictures** you're able to make for your assignments.

As a result, it's recommended that you purchase the camera body plus one of the zooms marked as *much better* in the columns below:

Canon

Barely acceptable

- EF-S 18-55mm (any version)

Much better

- EF-S 15-85mm f/3.5-5.6 IS USM
- EF-S 17-85mm f/4-5.6 IS USM
- EF-S 18-135mm f/3.5-5.6 IS USM
- EF-S 18-135mm f/3.5-5.6 IS STM
- EF-S 18-200mm f/3.5-5.6 IS

Nikon (Nikkor)

Barely acceptable

- AF-S DX Zoom 18-55mm (any version)
- AF-P DX Zoom 18-55mm (any version)

Much better

- AF-S DX 16-85mm f/3.5-5.6G ED VR
- AF-S DX 18-105mm f/3.5-5.6G ED VR
- AF-S DX 18-140mm f/3.5-5.6G ED VR
- AF-S DX 18-200mm f/3.5-5.6G ED VR II

Either of the **EF-S 18-135mm f/3.5-5 lenses** will be the best overall choice for Canon shooters. The newer STM version is superior when recording video of moving subjects, but as that element of video capture won't be a significant part of your SAIT journalism training, and the older USM version is often available for less money, including in camera body + lens bundles, you can safely go with the USM variant of this lens unless moving-subject video capture is a personal priority for you.

The **AF-S DX 18-140mm f/3.5-5.6G ED VR** is recommended for those armed with a Nikon.

Note: the list of recommended lenses assumes that your digital SLR is one of the entry-level or midrange models in the previous section.

Large-aperture fixed focal length (non-zoom) lens options

An affordable wide angle-to-telephoto zoom will be what you need to photograph the majority of your first-year assignments. An important minority of assignments, though, will require a lens that's tailored to low light and portrait work. This means, among other things, a non-zoom lens whose maximum aperture is between f/1.4 and f/2.8. (Don't worry if you're not sure what this f-number means as it'll be covered in first semester.)

Choose from one of the following lenses:

Canon

Acceptable

- EF 50mm f/1.8 STM
- EF 50mm f/1.4 USM

Much better

- EF 40mm f/2.8 STM
- EF 85mm f/1.8 USM

Nikon (Nikkor)

Acceptable

- AF-S 50mm f/1.8G
- AF-S 50mm f/1.4G

Much better

- AF-S DX 35mm f/1.8G
- AF-S 85mm f/1.8G

Of these, the **EF 40mm f/2.8 STM** is recommended for Canon and the **AF-S DX 35mm f/1.8G** for Nikon. These two lenses have proven themselves to be great performers for first-year students.

As before, the list of suitable fixed focal length lenses assumes that your camera is one of the entry-level or midrange models described earlier. (That said, all but the AF-S DX 35mm f/1.8G are compatible with the higher-end digital SLRs too.)

Students have experienced focusing problems with the following lenses. **As a result, you'll want to avoid purchasing them:**

Canon

- EF 50mm f/1.8, EF 50mm f/1.8 II

Nikon (Nikkor)

- AF-S 50mm f/1.8D

External flash options

Many of the assignments you will photograph in the first year will either benefit from or require that an external flash be employed to supplement the room light or sunlight. The flash you select must be the kind that slides onto the top of the camera, supports through-the-lens (TTL) flash exposure metering, optical off-camera triggering with TTL brightness control and has a head that can tilt straight up as well as swivel fully to the left and right.

While various third-party companies produce external flashes that purport to be compatible with Canon and Nikon cameras, every one we've tried falls short in the area of TTL flash exposure correctness and consistency. Canon's and Nikon's own flash units, however, work properly in this regard.

Therefore, it's strongly recommended that you purchase only flash units actually made by Canon or Nikon. Students who've purchased other brands of flash in recent years, including Godox, Metz, Nissin and Yongnuo, have experienced both minor and not-so-minor TTL-related problems with those units. Those who opted for Canon- and Nikon-branded units have had a much better experience.

With that in mind, choose one of the following current or discontinued (but still fully compatible) flash units:

Canon

Bare minimum

- Speedlite 320EX

Much better

- Speedlite 430EX II
- Speedlite 430EX III-RT
- Speedlite 600EX-RT
- Speedlite 600EX II-RT

Nikon

Bare minimum

- Speedlight SB-500

Acceptable

- Speedlight SB-600
- Speedlight SB-800

Much better

- Speedlight SB-700
- Speedlight SB-910
- Speedlight SB-5000

The **Canon Speedlite 430EX II and 430EX III-RT** will do everything a Canon shooter needs in the first year of the program as well as both the second-year writing major and second-year photojournalism major. (The 430EX II is long gone from most store shelves. But if you can find one, and it's selling for less than the 430EX III-RT, buy it.)

Note: *The Canon Speedlite 470EX-AI does have the necessary capabilities but is also overly bulky and somewhat costly, particularly when compared to the Speedlites mentioned in the previous paragraph. As a result, **the 470EX-AI is not recommended.***

The **Nikon Speedlight SB-700** is a great flash for the money. It has all the features Nikon shooters will need in the first year as well as the second-year writing and photojournalism majors.

Note: *You can't use a Canon flash on a Nikon camera, or vice versa.*

Batteries for external flash

Regardless of which model of Canon or Nikon flash you choose, remember to also get at least one set of batteries for it. Most take four AAs, either non-rechargeable alkaline or rechargeable nickel metal hydride (NiMH).

NiMH batteries, though more expensive initially, will quickly save you a lot of money compared to purchasing multiple sets of non-rechargeable AA alkalines to keep your flash powered. Plus, some NiMH batteries, including the specific ones listed below, enable the flash to fire again MUCH sooner than alkalines (or lower-cost NiMH for that matter). The flash performance difference between the best NiMH and everything else is significant. The result is more exposures in which the flash fires properly, giving you greater opportunity to capture successful pictures.

You'll quickly appreciate, as you start to work with flash, the benefits that come from using the right rechargeables to power a Canon or Nikon flash.

The following NiMH AA rechargeables are recommended, as all have been tested to provide excellent performance:

- **IKEA LADDA 2450** (in the white battery casing, not the brown)
- **Energizer Recharge Power Plus** (the flash-friendly version of this battery says "Power Plus" on the product packaging and "2300 mAh" on the cells themselves)
- **Panasonic Eneloop Pro** (which can be bought in a bundle with an excellent charger)

You'll need a charger too. Any NiMH-compatible charger will do, though if you spend more on a charger you generally get one that charges more batteries simultaneously and completes the charging process faster.

Portable reflector options

An essential tool for brightening shadows outdoors, one that can also act as a surface to bounce light from your flash, a collapsible reflector will get lots of use in the first semester and beyond.

Purchasing one of these – or an alternate that has the same characteristics – is required:

- **PhotoRepublik 22" Silver/White Reflector** A small-diameter reflector that can easily fit into a backpack or shoulder bag. (PhotoRepublik is the house brand of The Camera Store in downtown Calgary.)
- **Strobepro 32" 5-in-1 Folding Reflector with Handles** A medium-diameter reflector that comes with five different surfaces. This size of reflector is more useful than the smaller PhotoRepublik one mentioned above, but it's also more expensive and doesn't collapse as small for transport. (Strobepro products are available exclusively at the Calgary retailer of the same name.)

Tripod and memory card notes

A **sturdy tripod, capable of being extended to at least 1.2 metres**, is required. You can choose one of the many cheap options available, as most provide okay stability for occasional use as long as they aren't raised too high. To get yourself properly equipped for the first year, though, an entry-level travel tripod such as the **Vanguard VEO 235AB (aluminum model with the TBH-50 ball head)** will serve you well and is a bargain for a tripod of this quality.

Load yourself up with a minimum of two **16GB or larger memory cards**. It's strongly recommended that you **stick to a name brand such as SanDisk** to ensure long-term reliability, to minimize the chance of your cards being incompatible with your camera and so you can avail yourself of tech support should a problem arise.

If your camera accepts SD memory cards, then you will be able to use the card reader supplied with your SAIT-issued Mac laptop to offload pictures. If your camera

takes another memory card type, such as CompactFlash or XQD, contact instructor Rob Galbraith to discuss your reader needs.

Portable hard drive options

A portable hard drive will be an essential backup device, not only for your photos but for everything you create as a SAIT journalism student. **Choose a portable (sometimes called a 2.5-inch) external hard drive** that connects to a **Type-A USB 3 port** (so that it will be compatible with your SAIT Mac's included multi-port adapter), doesn't require an additional power supply to operate and provides a **basic level of protection against rough handling**. The capacity must be **2TB** or more.

Our primary recommendation is the **LaCie Rugged Mini**, in a capacity of 2TB (or 4TB if you see yourself in photojournalism in the second year). This ruggedized hard drive will better withstand the daily transport and heavy use it'll see during your time in the journalism program and beyond. Plus, the Rugged Mini has served students well for several years. It's available both locally and online.

The going rate for a LaCie Rugged Mini seems to fluctuate. If, at the time you're ready to buy, it's pricier than you can manage, go with the **Silicon Power A80**, in 2TB capacity. (Search for "Silicon Power A80" on Amazon Canada to order, then choose the regular and not the Type C version.)

It's unwise to purchase a non-ruggedized drive, as you put your pictures and video files at greater risk of loss. If, however, a ruggedized drive isn't an option for some reason, then look at standard portable drives such as the **Seagate Backup Plus Slim 2TB**.

If you do go the standard-drive route, be sure to get a protective carrying case that will hold the drive and its cable.

Note: *In recent years, almost all of the drive problems experienced by students, including complete failures, have involved **Western Digital** non-ruggedized products. As a result, we're recommending that you **steer clear of this brand** in favour of the LaCie, Silicon Power and Seagate models listed above.*

If your wallet allows, step up from a hard drive-based portable storage device to one that employs an SSD. Most offer dramatically faster read and write speeds, superior durability and can be gotten in a much smaller physical size. That said, a 2TB SSD-based device will be more expensive than an equivalent hard drive, so be prepared to spend more to get more. The recommended model is the **2TB Samsung T5 Portable SSD**.

Equipment FAQ

Q. What happens if I don't buy some of the required items?

You run the risk of not being able to complete some assignments and having certain submissions penalized or rejected. More importantly, you won't be able to make the most of the opportunity to learn everything you can in your photography classes at SAIT.

Q. Where should I go shopping for camera equipment?

You're encouraged to begin developing a relationship with one of the specialty camera stores in town, as they tend to offer better service at similar prices to big box stores. Staff at the specialty stores are generally more knowledgeable, and more familiar with the requirements of SAIT journalism students specifically, than places such as Best Buy or Costco.

Calgary's three photo specialty stores are:

- The Camera Store
- Vistek
- Saneal Cameras

The photo department of London Drugs is also an option.

Q. Do I have to buy the required gear new or can I get it used?

As long as the camera body, lenses or other gear you're considering meet the minimum requirements for the program, by all means purchase used if you can.

Q. I intend to enter the writing and communications stream in the second year of the program. Will I need to buy a lot of additional photo equipment at that time?

No. Your second-year course work will involve plenty of photography, and video too. But the camera gear you purchase for the first year, as long as it adheres to the requirements set out in this document, will meet the needs of your second-year courses as well. At most, expect to purchase some inexpensive video accessories during the second-year writing major.

Q. I hope to pursue the photojournalism option in the second year of the program. Will I need to buy additional photo equipment at that time?

Yes. Your gear needs will amp up considerably. An information session is usually held in the second semester of first year for those interested in the photojournalism major. The session covers the application process, expanded equipment requirements and why being a photojournalism major is awesome.

Q. Should I get insurance for my camera equipment?

Absolutely! It might be possible to insure the bulk of your newly acquired kit under a homeowner or tenant policy, either yours or your parents (if you live with them). Also, be sure to note down the serial numbers of each item, as well as capture a brief video clip of it all. This will be an important record of what you own.

Q. I've heard that both Canon and Nikon offer special programs for post-secondary photo students. Should I join the one offered by my chosen brand?

The answer is very likely yes. Both Canon Canada's Student CPS offering, and NPS Campus from Nikon Canada, provide several benefits, two of which are key: MUCH faster turnaround times in the event your gear needs to be repaired plus discounts on the purchase of certain cameras, lenses and flash units. The discounts can be significant.

- Canon's **Student CPS** is \$50 to join and runs for two calendar years from when you sign up. To see the discounts available to Student CPS members,

search for “**Canon Canada Student CPS purchase discount**” on Google.

- Nikon’s **NPS Campus** is free to join. Membership benefits will remain in place until the end of your time in SAIT journalism. To see the NPS Campus discounts, search for “**Nikon Canada Student Savings Program 2019**” on Google.

Review the program details carefully, to make sure the gear you intend to buy is either eligible for a discount, eligible for other benefits like faster repair times or both. You should be able to join either Student CPS or NPS Campus once you’ve been accepted into SAIT journalism.

Q. I have gear questions. Who should I direct them to?

Email photojournalism instructor Rob Galbraith at rob.galbraith@sait.ca about anything related to the gear requirements. Please contact Canon and Nikon directly with queries about Student CPS and NPS Campus, respectively.