

CAMERAS



Purchasing Suggestions Photography, 2008

A photography teacher of the 1970s or 80s typically required students to buy a simple manual SLR. As this class primarily deals with digital photography, there are a variety of choices available to you. If you have a recently produced camera, you should probably be in good shape.

However, while sensor technology and the digital darkroom have revolutionized the art of photography, the basic principles of composition and exposure remain the same. If you're without a camera or you want to take advantage of Yuletide largess, I have some suggestions for you.

Regardless of what you get, you should choose a camera that has manual controls (often

indicated by an M on the camera's control dial). You should also be able to easily adjust the aperture and shutter speed.

Tips and Hints

Megapixels: theoretically, the more the better. However this isn't always the case: a 6mp digital SLR (dSLR) will usually produce a better image than an 8mp point and shoot. In low light conditions—gyms or theaters, for example—there's no comparison: dSLRs handle dim light far better than most other formats. Read some reviews at dpreview.com or another reputable site and go from there.

Other features: Anti-shake, also called Image Stabilization or Vibration Reduction are useful

but not necessary. Look for a camera with an easy to navigate menu system and external controls. Longer zooms may give you more reach, but they can also compromise image quality. The important thing is that the camera should let you accomplish what you seek to do with a minimum of fuss.

Four Categories

For the sake of simplicity, I'm going to break my suggestion into 4 different categories: simple point and shoots, advanced point and shoots, entry level dSLRs and prosumer dSLRs. ***If you want a list of suggested cameras, skip to page 4.***

Point and Shoots

Point and shoot cameras (also called all-in-ones) are small, light, easy to use and capable of capturing beautiful images. Their affordability and convenience explains why, collectively, they constitute the largest portion of the camera market.

Simple point and shoots are usually fully automatic. However there are several models that combine small size, convenience and affordability with the ability to manually control the process of capturing an image. They tend to be slightly more than their fully-automatic brethren, but they have more features and manual controls. They typically start around \$200.

For our purposes, the most important feature is the ability to control the shutter speed and aperture manually. The better cameras have these controls on the main command dial on the top of the camera. The last thing you want to do is miss a shot because you were too busy fiddling with menus.

Ideally should have an optical viewfinder in addition to the screen. However, this is becoming less common. Image stabilization is a useful feature that minimizes camera shake when you're using a longer lens. Typically zooms in this range go from 38-105mm (3x) to 38-400mm (10x). Longer lenses often involve compromises in image quality and you won't need more than a 3x zoom for the class.

Advanced point and shoots tend to be larger, more full featured and more expensive. They often resemble dSLRs and can come close to matching the more expensive cameras in image quality—in the right conditions.

Most advanced point and shoots have longer lenses with some kind of stabilization. They give you the option of using an electronic viewfinder (a few offer optical) as well as the ability to use the rear screen to compose and focus. Many of them have articulated screens that let you take pictures at creative angles. A very useful feature is the addition of a "hot shoe" mount for an external flash.

Point and Shoot Advantages

Point and shoots are relatively inexpensive and convenient. For most people, these are the cameras they could carry with them everywhere. They're less likely to scare your subject and, in the case of the superzoom point and shoots, they can sport a combination of wide angle and long telephoto lens. Since point and shoot cameras are integrated, they're not likely to get dust on the image sensor. They are particularly useful for close up (macro) shots. Most allow you to record video.

Disadvantages

Compared to dSLRs, point and shoots are slow to focus, although this is changing. They don't do particularly well in dim light without a flash. Their fixed lenses limit customization, although some allow add-ons. Most use smaller sensors, which can degrade image quality. The emphasis on small size can actually hurt usability for people with larger hands. Important controls are frequently buried in menus, while often pointless gimmicks can impede usability.



Single Lens Reflex Cameras

Digital SLRs offer the best combination of versatility and image quality. They are relatively compact and ideal for a variety of conditions. They are by far the best cameras for capturing high-speed events, such as sports.

Medium and large format cameras provide the best image quality of all, but the bulk and expense makes them unreasonable for everyday use.

The SLR's greatest advantage lies in its ability to use a variety of lenses, each designed for a specific purpose. More expensive lenses offer excellent image quality.

Single lens reflex cameras use a mirror or prism to reflect light through an optical viewfinder. This gives you two advantages: first, you get an accurate view of the scene, and as importantly, the optical viewfinder is clear, bright and fast: there is no delay or jerkiness, as you often see on a screen or electronic viewfinder. Many dSLR now let you see a scene on the rear screen as well, much like an all-in-one.

While point and shoot autofocus systems are getting faster, SLR autofocus mechanisms are extremely fast, to the point where they often seem almost instantaneous. DSLRs can shoot between 2 and 11 full resolution images per second for long bursts and there is minimal lag between shots.

Entry level SLRs are small, light and often have a series of scene modes similar to those of a point and shoot. They're usually bundled with a kit lens of some kind. Of course you have the option of adding additional lenses later on. They offer a comprehensive set of manual controls, although many of these are hidden in a series of menus.

Advanced dSLRs are larger, heavier and more well protected from the elements. While they have more features than the entry-level cameras, they often have many of the more important features easily accessible through a series of switches, wheels and knobs on the outside of the body.

dSLR Advantages

DSLRs have sophisticated autofocus systems that are faster and more versatile than those found on point and shoot cameras. The optical viewfinder gives a clearer, more accurate representation of the scene. They provide a plethora of manual controls that are easy to access. Low light photography is possible because their large sensor size allows the camera to collect more light. All dSLRs allow you to use external flashes. Most importantly, these cameras have the ability to switch lenses, giving them a huge range of focal lengths.

Disadvantages

The greatest drawback to these cameras is the cost: entry level dSLR bodies start around \$400, while advanced cameras cost \$1,000 or more, and that's often without a lens. Even "small" dSLRs are far larger than most point and shoots, and with size comes weight. Changing lenses allows dust to enter the camera body, which can result in spots on the images. The mirror in the body can be noisy, and the sheer size of some bodies/lenses could scare the hair off of a cat. These cameras are not particularly good for snapshots.



It's Not About the Camera

I can't really suggest any one brand or type of camera. Before you run out and spend a mint on a new camera, you need to figure out what you plan to use the camera for when the class ends. If you already have a recent model, then I suggest that you save your money.

For those interested in seeking out new cameras for class, consider some of the more sophisticated point and shoot cameras. These allow you to manually control the settings, they're small and relatively inexpensive. DSLRs give you more flexibility, but with far greater expense.

Don't worry too much about megapixels or fancy "trick" modes. Most cameras now have enough resolution to let you print large images without much worry. I've printed decent 13 by 19 inch prints from a 6 megapixel image.

Most importantly, you should look at professional reviews. There are several excellent sites available.

In addition to the camera, make sure that you buy a decently sized memory card. Most point and shoots use SD cards, but make sure that you buy the type suggested by you camera manufacturer. A tripod is also useful, but not mandatory.

The list below isn't exhaustive: there are many other decent cameras on the market. **Remember that the most useful feature for the class is an easily accessible manual mode.**

<http://www.dcresource.com/reviews/cameralist.php>

<http://www.dpreview.com/>

<http://www.steves-digicams.com/>

Point and Shoots

Under \$300

Canon PowerShot SX100 IS

Canon PowerShot A570 IS

Canon PowerShot A720 IS

Fuji Finepix s700

Kodak EasyShare Z712 IS

Sony DSC-H7

Over \$300

Cannon Powershot S5 IS

Cannon Powershot G9

Panasonic Lumix DMC-FZ 18

Sony DSC-H9

Digital SLRs

Starter models (under \$1,000, with kit lenses)

Canon Digital Rebel XT and XTI

Nikon D40, D40X and D80

Olympus E-410 and 510

Pentax K100D

Sony A-100

Over \$1,000

Canon D30 and D40

Nikon D200 and D300

Panasonic Lumix DMC-L10

Sony A-700