

**North Carolina State University
College of Design
Graphic Design and Industrial Design Department**

**GRAPHIC DESIGN
Computer Purchase Recommendations**

The Graphic Design Department at NC State has integrated computers and digital media with design and learning for over two decades—the department was the first in the UNC system to require student computer purchases. Courses are typically held in a studio environment where each student has a personal workspace that includes a desk and access to the university network and e-mail via Ethernet connection, as well as wireless. Some courses may be delivered primarily online, or as hybrid—online and face-to-face. Graphic Design integrates computer technology in virtually every step of the design process (from conception to production to distribution) and in a wide range of media (from print to screen to projection).

**Hardware + Software
Computer Purchase Recommendations List**

This document outlines items required beginning in the second semester freshman year for graphic design students (Spring semester of First Year Experience). Students must plan purchases to ensure delivery of their hardware and software by the first day of class of that semester.

Adobe and Apple—the developers for most of our requirements—routinely release new products and/or updates to their existing product lines. This can occur close to the beginning of school or at the time of purchase. New products may have a delivery date past the beginning of our academic semester. This could leave one without a computer and/or software in required core courses. With this in mind, please review delivery dates on anything you plan to purchase. For the latest educational prices on Apple computers and Adobe software, visit the NC State Bookstores online at: <http://shop.ncsu.edu/> or phone (919) 515-3400. NC State Bookstores can provide savings even over regular educational prices. Students should compare prices before making their final purchase.

Apple computers continue to be an industry standard for graphic design. Most models (configurations) in the MacBook Pro, iMac, iMac Pro, and Mac Pro lines will be sufficient, but one may want to look closely at differing options—here are a few things to consider: Higher processor speeds result in faster processing of files. Processor speed is measured in gigahertz (GHz). Memory or RAM is measured in giga-bytes (GB). Greater GHz and RAM equals greater working speed and usability. Additional services and hardware may also include Apple's AppleCare service plan or third-party loss/damage coverage, headphones, external/portable hard drive (strongly recommended for back-ups) or high-capacity memory stick (a must) and (only later) a personal printer and/or basic scanner.

Computer Configurations to Consider

- MacBook Pro (laptop)— Laptops are compact and very useful for their portability, but can be difficult to use for extended periods of design and may reduce some types of productivity (small screen sizes characteristic of all portable computer devices are an issue for some, for example). For this reason, it is highly recommended that an additional display and extended keyboard be included (displays from other vendors will work with Apple computers).
- iMac or iMac Pro (all-in-one)— iMacs are 'all-in-one' personal computers (display monitors are built-in, making for a single computer box). This makes them compact and somewhat portable. The iMac Pro is a model with higher specifications.
- Mac Pro (tower)— These models offer higher specifications, but do not come with a built-in display, so the purchase of a dedicated display is required. Also be mindful that these are "professional-grade" models and could end up being mostly underutilized by a typical use pattern.

Digital Camera Specifications

Second semester (spring) during First Year Experience, freshmen will take GD210 Imaging and Tech Tinkering. This course is an introduction to a variety of image making technologies and requires the purchases of a digital camera. With a wide range of models and features available out there, here are the most important facts to keep in mind when looking for an adequate purchase: Digital cameras are ranked by their mega-pixel count—more "mega-pixels" equals more "quality."

A minimum of 8 mega-pixels for the camera is required, as well as manual over-rides on automatic exposure and possibly focus controls. Manual focus control is often indicative of a better camera (look for this feature as one of the criteria when seeking a better option). Compatibility with the Apple platform is also essential. Rechargeable device-specific batteries and charger is also key (cameras running on over-the-counter consumer batteries are not adequate). Digital cameras also need Memory Cards to temporarily save your images as you work through a photo shoot. These come in several sizes and are manufactured by a variety of known brand names. Memory Cards that come with newly-purchased cameras (manufacturer-provided) are generally of low capacity and, in a sense, generic (they facilitate only "start-up/novice" use).

Optical versus digital zoom is also recommended and cameras with the ability to attach lens are a plus, but not required. It is highly recommended that you try a range of cameras before purchase (for example, a used Digital SLR could be more affordable and a better purchase than your typical off-the-shelf point-and-shoot). Find one that feels right for you and which allows you to be comfortable while shooting—particularly while shooting in manual mode. For on-line reviews visit <https://www.dpreview.com> and <https://www.cnet.com>.

Software Specifications

Fall sophomore courses require the following Adobe software: Photoshop, Illustrator, and InDesign, which may be purchased as part of Adobe Creative Cloud: <https://www.adobe.com/creativecloud.html>. Adobe Creative Cloud is sold by subscription only and students should purchase the full Creative Cloud for better value. Educational discounts are available from Adobe, <https://www.adobe.com/creativecloud/buy/students.html> or the NCSU Bookstores, <http://shop.ncsu.edu/>.

You will also need: TypeTool 3, https://www.fontlab.com/index.php?option=com_content&task=blogcategory&id=80&Itemid=39 and the Adobe Font Folio Education Essentials: <https://www.adobe.com/products/fontfolio-education-essentials.html>

Hardware Checklist

- Apple computer (MacBook Pro “laptop,” iMac, iMac Pro “all-in-one”, or Mac Pro “tower”)
- Display (highly recommended for laptops, required for towers, second display optional for iMacs ... note: third-party vendor displays will work with Apple).
- Ethernet cable (Category 5 or 6 for connection to network in studio)
- Security cables and locks
- Surge protector to protect against power problems
- External hard drive for back-ups
- Digital camera (8 mega-pixel minimum)

Software Checklist

- Adobe Creative Cloud Subscription
- TypeTool Basic Font Editor
- Adobe Font Folio Education Essentials