LAPTOP RECOMMENDATIONS (Spring 2023)

2. Minimum 16 gigabytes of RAM.
4. A “discreet graphics card” such as: NVIDIA GeForce RTX 2070, or an AMD Radeon RX 5700 XT. Strongly recommended: an NVIDIA GeForce RTX 3070 or better (AMD Radeon RX 6700 XT, for example). A GPU (Graphics Processing Unit) is required in order to run the design software that these majors use.
5. Mouse.
6. If possible an external display is recommended, too.

WINDOWS vs MAC
For architecture, interior architecture and landscape architecture, ALWAYS choose a Windows laptop. For graphic design and video editing, a MAC might be slightly better. However, architecture and landscape architecture require compatibility with programs that are not accessible for Mac, and the industry relies heavily on Windows. People who use Macs in landscape and architecture are either bosses (who don’t use the design software), or Apple fans who learn to cope with the issues because they don’t want to give up on the Apple ecosystem. If you are not technologically savvy, I’d suggest you stick to Windows, your journey will be smoother. There is increased incompatibility with Windows software with the new M1 and M2 chips from Apple, making the MacOS in landscape and architecture might be slightly better. However, architecture and landscape architecture require compatibility with programs that are not accessible for Mac, and the industry relies heavily on Windows. People who use Macs in landscape and architecture are either bosses (who don’t use the design software), or Apple fans who learn to cope with the issues because they don’t want to give up on the Apple ecosystem. If you are not technologically savvy, I’d suggest you stick to Windows, your journey will be smoother. There is increased incompatibility with Windows software with the new M1 and M2 chips from Apple, making them even more cumbersome to work with.

SIZE/SCREEN:
You should be aiming for a 15-inch laptop. That will give you the right balance between power and size. You don’t want a very small (13-inch) or thin laptop because they won’t be as powerful. And you might not want a 17-inch laptop because despite the benefit of a larger screen, they are heavier. If you get a 15-inch laptop, you can still buy a monitor aside that you can plug at home. Many students do this! In general, it’s important to test the weight and make sure you are comfortable with the size. You are going to be carrying your laptop everywhere. Take your backpack with you if you are going to BestBuy or Walmart to make sure it fits, and that you are ok with the weight.

SCREEN/RESOLUTION:
If you have settled for the 15-inch laptop, next step is choosing the right resolution, which is essentially how small the pixels are, and therefore how many of them fit in your screen. The more the better, of course, until the price is a problem. The options will be FHD, QHD and UHD (4K).

In general, the smaller your screen is, the more resolution you might want (4K). The larger your screen, you might not need that much resolution because the price will increase exponentially. Don’t get me wrong, if you have the budget to afford a 4K 17-inch laptop, please go for it!

Ideally, for design:

13-inch laptop – UHD, 4K
15-inch laptop – FHD, QHD, 4K
17-inch laptop – FHD, QHD

The sweet spot would be a 15-inch laptop with an QHD screen. 15-inch with FHD won’t be the end of the world if the rest of the specs are what you are looking for. Think that you can still buy an extra cheap monitor to compensate for the “lower” resolution. A 17-inch laptop with a FHD is not a bad choice either, especially because a 17-inch with QHD or 4K will be very pricey. Again, an alternative solution would be to buy an extra cheaper monitor to make up for smaller screens or lower resolutions.

GPU (GRAPHIC PROCESSING UNIT)
For design professions that involve graphic rendering (architecture, landscape architecture, video and 3D animation, etc) this is the key element that will differentiate a good computer from a bad computer.

You need a laptop with a DISCRETE GPU, not an integrated one. Nowadays, the minimum should be an NVIDIA RTX 30xx. The minimum would be the 3050, then 3060, 3070 and 3080 at the top.

I repeat, DON’T BUY A LAPTOP WITH AN INTEGRATED GPU, it’s not enough for this profession.

CPU (CENTRAL PROCESSING UNIT)
The CPU is the heart of the computer, very important. However, in order to support a powerful GPU, your CPU has to be really good by default. So, you don’t have to worry so much about this aspect. The CPU will be ok whatever laptop you choose that has the
above specs. There are two options in the market, Intel or AMD (Ryzen chips). They have their pros and cons. Intel is slightly more powerful in general, AMD is more efficient, better for multitasking and consumes less energy (longer battery time). But again, at this level, you might not appreciate the differences in terms of performance.

RAM
RAM memory is what allows your computer to jump seamlessly between programs. Your laptop will switch faster between tasks with a higher RAM memory. Following the specs above, your laptop will come most likely with a minimum of 16GB of RAM. That’s the bare minimum nowadays. However, I recommend aiming for 32GB if you want your laptop to last a couple years more.

STORAGE
Storage is obviously related to the amount of memory is used to save and keep files locally in your laptop. This internal storage can be complemented by external drives or thumb-drives, but it’s important to have a good and large-enough internal drive to be able to install programs and save files. Similar to nowadays smartphones, if your laptop starts running out of internal storage space, it will start to slow down and undergo a drop in performance.

The standard today for internal storage is an SSD card (Solid State Drive), versus the older Hard Drive standard. The former is faster, physically smaller (just a card), more reliable, more resistant, and more expensive (but getting cheaper and cheaper every day). Today, the bare minimum should be 512GB. But I recommend aiming for 1024GB (or 1TB, same thing). More expensive laptops will give you the ability to have two internal slots to plug two SSD cards, so that you can use one for installing programs and the other one for saving all your files. This way, if your computer crashes, your work will be safely saved in the second SSD. Again, going for two SSD is not possible for majority of laptops. You will be OK with one 1TB SSD, and then having a small external drive to backup your files every now and then.

RAM and STORAGE UPGRADEABILITY
The possibility to upgrade/replace both your RAM and SSD can extend the life of a laptop a couple of years. The more RAM the faster the laptop will be able to jump between programs and have several programs open at the same time. And software is occupying more and more space every day, so planning ahead helps.

This is something that will be available only for more expensive computers, and that’s why I put this at the end of the list. Finding a computer with all the mentioned specs above won’t be difficult for around USD 2000 or less.

Finding a computer with all the above specs and upgradable/replaceable RAM and SSD will probably take the price to USD 2500-3000. Read the detailed specs to know what you are getting.

SSD:
- Bare minimum/not bad = 512GB
- Good/really good = one slot that can take 1TB-2TB cards
- Extra good = two slots, one for 512GB-1TB, and a second for 512GB-1TB-2TB

RAM:
- Bare minimum/not bad = 16GB
- Good/really good = soldered 32GB/64GB
- Extra good = upgradeable (not soldered!) 32GB to be replaceable with 64GB

CONCLUSION
- 15 inch screen, QHD
- non-soldered RAM. If soldered, aim for 32GB. If non-soldered, you could go for 16GB and buy 32GB later.
- Either way, 16GB is the minimum minimum nowadays, 32GB will the minimum in 3-5 years
- a discreet GPU (aka graphic card). Nowadays, minimum a NVIDIA RTX 3050-3060. 3070-3080 better but more expensive
- absolute minimum storage 512GB SSD. Better if 1TB SSD, way better if 2TB SSD or two separate 1TB SSD
- the CPU (the Central Processor Unit) will be ok whatever laptop you choose that has the above specs. There are two options in the market, Intel or AMD (Ryzen chips). They have their pros and cons. Intel is more powerful in general, AMD is more efficient, balanced, and with better battery.
- See the usual suspects on the next page
THE USUAL SUSPECTS:
Prices will vary. Today, Intel last CPU model is generation 12th, so most laptop manufacturers are trying to get rid of their 11th generation at lower prices. You won’t notice the difference. All these are really good options, but the vary in price. Regardless, you will have a laptop for the next 4-5 years, or longer.

LEGI ON (really good, fair price for the quality)
https://www.lenovo.com/us/en/p/laptops/legion-laptops/legion-7-series/legion-s7-15ach6?cid=us%7Cse%7Cgoogle%7Cgs_smart+shopping%7Cgs_seasonal_push%7Cgs_seasonal_push%7C%7C82K8007YUS%7C14380674959%7C126651798375%7Cpla%3D1465974320833%7Cshopping%7Cbrand&gclid=Cj0KCQjw29CRBhCUARIsAOboZbLhGN6zvfnNx5-ZsjKmyVBbDU5G._9M2PndMwCUttW266gHlPgs4MaArQ-EALw_wcB

ASUS ROG STRIX (really good, fair price for the quality)
Try to avoid soldered RAM of just 16GB if you want your computer to last longer. If you find a really good cheap offer and think you can buy a new laptop in 3-4 years, then soldered 16GB wouldn't be too bad.

MSI STEALTH (really good, fair price for the quality)

MSI RAIDER (really good, fair price for the quality)
- both the Legion and MSI are really good options. You will have a laptop for the next 4-5 years, or longer.
- even if the raider has a better screen (more resolution), you might like the stealth more because of the feeling of it (something closer to a mac, with an aluminum case. the raider is more plasticky. Almost same specs with the only difference of the screen. The screen is much better the raider's (4k), but the Stealth is lighter and smaller

RAZER BLADE 14’ or 15’ (really good, but very expensive)

DELL XPS 15’ (only those with Nvidia RTX, very good and light, really good technical service, but expensive)

DELL PRECISION 15’ (really good, really good technical service, but by far the most expensive option together with the Blade)