# Equipment Purchase Advice

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# Questions

### Question 1
What hardware do I need to get me through college?

### Question 2
How much do I have to spend on this hardware?

### Question 3
Where should I purchase this hardware?

# Answers

## Question 1

What hardware do I need to get me through college?

This answer will change depending on what your needs are:

Some departments require highend hardware due to the nature of the software you will be running on the Laptop others do not.

# Answers

## Question 2

How much do I have to spend on this hardware?

How long is a piece of string?

This will be less of a concern if you do not need a high specification laptop as generally lower specification computers cost less

Or if you are buying a Mac - a lot

# Answers

## Question 3

Where should I purchase this hardware?

**_Never_** purchase your equipment from a bricks and mortar store, they will always be more expensive it is highly unlikely you will get what you need, you will get what the shop needs to sell.

Apple: purchase from the Apple educational store (www.campus.ie/apple), you will get a student reduction.

PC: Purchase online from komplett.ie, if exchange rate is good from Amazon.co.uk or scan.co.uk

Best advice: shop around

# 5 major things to consider when purchasing a laptop

1. Processor
The brain of your computer, how fast the computer completes tasks
Intel have 3 main ranges of processor - i3, i5, i7
i3 is the low end, i5 mid range, i7 high end
The part number - say it is a i5 7200 - the i5 is a mid range processor, the first digit (7) is the generation of the processor. So the lower this number is the older the processor is. The latest generation of Intel is 8th (only just released). The next 3 digits are the part number, as a general rule of thumb higher is better.
You will also see a number like 2.8GHz, this is the frequency of the processor, again higher is better.

# 5 major things to consider when purchasing a laptop

2. Memory (RAM)
RAM (Random Access Memory) is fast memory used to store the files you are working on at any given time, it is also used to store your operating system. If you are using your laptop for basic tasks - word processing, web research, etc 4Gb should be enough. If you are doing anything more complicated you will need at least 8Gb although 16Gb would be ideal.

# 5 major things to consider when purchasing a laptop

3. Graphics
Some more expensive laptops have dedicated graphics cards. Graphics cards are used by many high end applications and games, they speed up the display output and quality of the images you see on your screen. If you are using your computer for Video, 3D, rendering, Illustrator and Photoshop you should be looking for a laptop with a graphics card. On the listing or specifications of the laptop if it says: Intel HD graphics or Intel Iris you probably don't have a dedicated graphics card. If you see Radeon or Nvidia followed by a part number you do have a graphics card. Generally speaking it is only the more expensive laptops that have dedicated graphics.

# 5 major things to consider when purchasing a laptop

4. Storage

Storage is used to store all your files, music, documents, videos and your installed applications.

There are 3 types of storage: Standard drives, Solid State Drives (SSD) and PCIe SSD (m.2).

a. Standard drives are the slowest and are mostly found in cheaper laptops or used as a 2nd drive in more expensive ones

b. Solid State Drives are found in most mid range laptops and offer a good balance between speed and price - try to pick a laptop with 256Gb or more as 128Gb is probably too small especially if you are installing professional applications

c. PCIe SSD's are found in high end laptops and are the fastest hard drives available now, a laptop with one of these installed will boot up and load applications extremely fast

# 5 major things to consider when purchasing a laptop

5. Price

Premium pricing (also called image pricing or prestige pricing) is an advanced marketing strategy - the practice of keeping the price of a product or service artificially high in order to encourage favorable perceptions among buyers, based solely on the price. The practice is intended to exploit the tendency for buyers to assume that expensive items enjoy an exceptional reputation or represent exceptional quality and distinction. Apple products fall into this category.

# Mac or PC - Pro's and Con's

Mac Pro's
1. Retina Display (more expensive models)
2. TouchBar (more expensive models) - if you are into that type of thing
3. Form Factor - small/compact
4. Design Style
5. Less viruses than PC (you can get Mac viruses though, common misconception you can't)

Mac Con's:
1. Very expensive for less powerful components
2. Unable to upgrade
3. Less software options (especially in 3d software)
4. Limited graphic card options
5. Due to small form factor generally components (RAM, etc) have to run slower to prevent overheating

# Mac or PC - Pro's and Con's

PC Pro's:

1. A lot cheaper for more powerful components
2. Upgradability
3. More software options
4. Wide range of components and options available

PC Con's:

1. Some laptops build quality can be a bit light/plastic
2. Unable to use Apple software (Final Cut Pro, Logic Pro), although some PC laptops can have Mac OSX installed (hackintosh)
3. More viruses, although Windows built in virus protection Defender does a really good job protecting the PC especially if you use a bit of common sense.

# Laptop build comparison

Mac: 15-inch MacBook Pro:
2.8GHz quad-core 7th-generation Intel Core i7 processor
16GB 2133MHz LPDDR3 memory
Radeon Pro 555 with 2GB memory
256GB SSD storage
Max Resolution: 2880x1800
€2,666.64 (educational pricing)

Like for Like PC laptop from Scan.co.uk
Intel Core i7 7700HQ 2.8GHz, 3.8GHz Turbo
16GB Corsair Vengeance (2x8GB) - 2400MHz DDR4
6GB NVIDIA GeForce GTX 1060
250GB Samsung 960 Evo, PCIe 3.0
1920x1080 Max Resolution
€1600 approx (exchange rate dependant)

# What can I get for €2670

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1. Mac: 15-inch MacBook Pro
2. Cup of coffee from Starbucks

1. PC laptop from Scan.co.uk
2. Canon EOS 750D Digital SLR Camera 24.2 MP, 18 - 55 mm Lens, CMOS Sensor 3-Inch LCD (amazon.co.uk)
3. Trip to Amsterdam or Barcelona to take some nice pictures with your fancy new camera.