

UNIVERSITY OF PRETORIA
DEPARTMENT OF CHEMICAL ENGINEERING
PURCHASING OF PERSONAL COMPUTERS (2021)

When purchasing a Laptop computer, the following should be considered:

Minimum configuration:

- Preferably a 15.6" Laptop Computer with at least an Intel i5 CPU (i7 preferred)
- 802.11a/b/g/n -enabled (preferably a/b/g/n/ac) WLAN and Gbit LAN
- At least 8 GB RAM Memory (>8 GB RAM preferred)
- Disk Drive > 500 GB HDD or 512 GB SSD (preferred)
- Display resolution of 1440 x 900 or above (with VGA/HDMI video out)
- Sufficient USB ports, e.g. 3 or 4 (USB 3.0 preferred)
- DVD Multi Writer (but not essential)
- Separate mouse preferred
- Carry bag
- >= 32 GB USB Memory Stick
- Printer (Laser preferred)

It is imperative that the basic operating system software (including manuals and/or DVD's) be purchased with the computer. The current operating system is MS Windows 10. Please ensure that the quoted price for the PC includes a valid license for the operating system and any other software uploaded on the system.

Expansion of the abovementioned basic configuration will depend on own requirements and availability of funds and may include the following:

- (i) CPU with a faster clock speed (be careful of processors other than Intel).
- (ii) Larger hard disk drive (SSD drives gives better performance).
- (iii) Graphics card with 3D-capability will help with performance.
- (iv) Additional RAM-memory – probably the first additional requirement (consider upgrading to 16GB)
- (v) DVD-writer is not essential. A large USB flash disk is of greater use.
- (vi) An almost standard required accessory would be a large USB "Memory Stick" (>= 32 GB).
- (vii) Depending on the quality of printing required, and the available budget, one of the following can be considered:
 - Ink jet printer – Typical Hewlett-Packard and Canon. (Make sure of the cost of replacement of ink cartridges – running cost of the printer)
 - Laser printer – Typically Hewlett-Packard or Canon (low running costs)

SUPPLIERS:

There are many suppliers in Pretoria. Competition is strong – always ensure that you purchase from a reputable dealer who will also be able to provide efficient after-sales support. There are great online deals available these days.

SOFTWARE:

Most suppliers offer software to bona fide students at special rates. Make sure that you enquire about these possibilities.

The following software is used:

- A combination package like MS Office (latest version is MS Office 2019 for 1 user or MS Office 365 for several users) comprising of MS Word, MS Excel and MS PowerPoint. These can be downloaded free of charge by any student of the University of Pretoria.
- Programming language: The current Open Access Software suite, Python, is the medium of instruction for programming purposes. Matlab (The Mathworks), a licensed software package can be obtained by the local agents at a special tariff for students but is not a compulsory requirement.