University of Reading Department of Computer Science

Student Laptop Recommendations

For an undergraduate Computer Science student, having a laptop that can handle a variety of tasks including coding, compiling, running virtual machines, and sometimes even light gaming or graphics work is frequently beneficial. The suggested Minimum example specifications tailored to balance performance, portability, and price are displayed in the table and notes below. You will find these to be somewhat more advanced than noted at https://sites.reading.ac.uk/dts-hub/.

The **Minimum configuration** should provide a good balance for CS coursework, labs, and projects across our array of courses.

The **Recommended configuration** will provide an enhanced computing experience and approximate the capabilities of the PCs provided in our labs.

The most important components are in bold.

Component	Minimum	Recommended	Notes
Operating System	Windows 10/11	Dual-boot in Windows 10/11 and Ubuntu Linux	*Windows is most versatile for compatibility with various software used in our programme.* *A number of modules also rely on Linux for use in labs.* *Programme resources are **NOT tested on MacOS**, and you might find several of these to be incompatible, needing to rely upon remote access tools.*
Processor (CPU)	Intel Core i5, AMD Ryzen 5, or similar	Intel Core i7, AMD Ryzen 7, or similar	***Newer generations almost always preferred.*** *Recommended versions are better for more intensive tasks, such as machine learning or data science applications.* *Explore mobile CPUs.*
Memory (RAM)	16GB RAM	32GB RAM	***This is probably the most important component.*** *More RAM will enable smooth multitasking and running of complex IDEs or virtual machines.*
Storage	256GB	512GB or more	*An SSD is highly recommended over an HDD for faster boot times, quicker file access, and overall system responsiveness.*

Component	Minimum	Recommended	Notes
Graphics Card (GPU)	Integrated Graphics: Intel Iris Xe, AMD Radeon Graphics, or similar	Dedicated GPU: NVIDIA GeForce GTX or RTX series, AMD Radeon RX series, or similar	*A dedicated GPU is not necessary outside of the lab and can significantly increase costs, so only add one if personally desired.* *Explore mobile GPUs.*
Display	13-inch	15-inch	*More screen real estate is useful for coding and multitasking. Higher resolution can be beneficial.*
Battery Life	6 hours	8 hours or more	*Longer battery life is preferred to last through a full day of classes.*

Other Considerations

Build Quality - A durable build is important, as the laptop will be carried around daily.

Typical Components - Most devices will be equipped with built-in webcam, microphone, and WiFi capability. **WiFi is essential for most tasks on campus.**

Ports - Physical ports are not a major criterion for the programme. Having at 2 or more USB ports for connecting to external devices and an HDMI or DisplayPort for connecting to display screens will be useful. Thunderbolt ports and a headphone jack would provide additional versatility.

Keyboard - A comfortable, responsive keyboard is beneficial during long coding sessions.

Portability - Lightweight and slim designs are preferable for ease of transport, and consider your primary modes of transportation when selecting carrying bags (e.g., water or impact protection features).

Power Consumption - Generally, the Minimum specifications will consume less power than the Recommended specifications.

Price - Sensible options meeting the Minimum specifications can be found for less than £300, especially if refurbished. Refurbished business/corporate/professional laptops, which tend to cost more, are often affordable solutions that will last through the programme.