

Student Computing/IT Requirements 20-21

This document compiles the staff current computing / IT requirements required for the 20/21 academic year. These have been derived and updated from the various requirements our distance learning programmes have and from the requirements of the core tools you are expected to be using in the coming academic year.

While the following provides generic IT requirements for all students please check with your faculty / course team / handbook for any additional specific requirements and potential incompatibilities.

To summarise, our minimum computing requirements are as follows:

- Operating System: Windows 10 (64-bit recommended)
- Display: Minimum 1024 x 768, ideally 1280 x 768 or above
- Processor: Intel Core i5 (Minimum Dual Core 2 GHz)
- RAM: 4 GB (recommended 8 GB for better overall experience)
- Disk Space: 250GB
- Graphics Hardware: Minimum 128 MB graphics memory
- Internet connection: Recommend 10 Mbps download and 5 Mbps upload speeds

An equivalent Mac specification may be used however, it is worth checking your faculty / course team / handbook information to see whether there are any Windows-specific software requirements.

If your computer does not meet these exact requirements you might still be able to access the majority of King's College London systems, but your experience may not be as smooth as expected and, in rare occasions, you may not be able to access/use specific resources.

Meeting these requirements, and ideally exceeding them, will ensure that you can learn in the best and most efficient way. We also here recommend headsets, microphones and webcams that you may wish to purchase to further improve your experience.

For optimal performance, security and support, we recommend that you use one of the following internet browsers and always run the latest stable version: Chrome, Firefox, Safari (on Mac), MS Edge (Chromium-based or not)).

Please note that any new PC or Mac computer bought or upgraded within the last 3 years is likely to meet the minimum requirements for your learning needs.

For generic help on digital skills please visit the [Essential Digital Skills programme](#).

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Audio & Video Hardware

Audio

The microphone and speakers built into your computer are fine for generic needs, such as online meetings, but we recommend using a headset over long periods, for best posture, and for privacy reasons.

Please note that there are hundreds of headsets out there. What to look for on a conference headset is a noise cancelling microphone and a good frequency range the microphone can 'listen' to. Our ears can hear from 20Hz to 20KHz so choose a microphone that can cover as much of these frequencies as possible, without going to (expensive) studio microphone/headset.

Quick note on gaming headsets: They do look cool and are pretty expensive but the majority of them only cover mid frequencies, so you can be heard in the middle of a noisy gaming session. They are therefore not recommended.

Headset recommendations

Recommended headsets:

- Plantronics Voyager Focus UC Bluetooth wireless headset ([standard KCL IT recommendation](#))
- Blackwire 5220 USB-A or USB-C wired headset ([standard KCL IT recommendation](#))
- [Sennheiser SC 60 USB ML](#)

Alternative headsets recommended by faculties:

- [Logitech H540 Wired Headset, Stereo Headphone with Noise-Cancelling Microphone, USB, On-Ear Controls, Mute Indicator Light, PC/Mac/Laptop - Black](#)
- [Sennheiser PC 360 Special Edition Gaming Headset - Black](#)
- [Microsoft LifeChat LX 6000 Headset \(Business Packaging\) - Black](#)
- [EarPods with 3.5mm Headphone Plug](#) - as long your laptop has a plug which can support headphones and mic on one input

Microphone recommendations

Microphones recommended by faculties:

- [Blue Snowball](#) - a very popular budget friendly option
- [Blue Yeti Nano](#) - a step up from the Snowball with more control over recording pattern and sensitivity
- [Rode NT](#) - a professional quality USB microphone with direct headphone monitoring and integrated pop shield
- [Mpow headset](#) - a good solution for improving audio quality on a budget
- [USB Lavalier Microphone](#)

Video

If you have a laptop, the internal webcam should be well suited for most needs.

If you would like to purchase an external webcam or if you wish to get an upgrade on your internal webcam, it is important to look for the following:

- Ideally HD (720p or 1080p), no need to be 4K.
- In-built microphone, ideally noise cancelling (if you have no separate microphone).
- Check what type of USB port they use, and which do you have on your computer (some newer webcams use USB C and not standard USB 2.0, so make sure to check). If you do get a USB C camera and do not have a USB C port on your computer, you will need to buy an adapter, such as the one available [here](#).

Even the best webcams have their limitations and, if you own a DSLR or a mirrorless camera, you can use it as webcam (click [here](#) for a guide to help you get best results. Before you start, check that your camera can output a clean HDMI feed.

External Webcam recommendations

Recommended external webcams:

- [Logitech C525](#) – foldable HD 720p video calling with autofocus
- [Logitech C270](#) – plug and play HD 720p video

Alternative external webcam recommended by faculties:

- [Logitech Streamcam](#) - Full HD 1080p camera with USB-C for live streaming and content creation

Computers, tablets, and phones

We do recommend that you use a computer (desktop or laptop) rather than a mobile device (tablet or phone) to ensure that you have access to all the software needed for your studies.

Important:

- **Please note that some software (e.g. Labster), or services (e.g. proctoring) do not work on mobile devices, i.e. tablets and phones. You may also encounter difficulties when using Linux, virtual machines (VM) or Chromebooks.**
- **Please check with your faculty / course team / handbook for any additional specific requirements and potential incompatibilities.**

Windows PC

Operating System	Windows 8.1 or Windows 10 (S Mode or Surface RT not recommended) 64-bit recommended as not all applications will work on 32-bit Windows
Display	Minimum 1024 x 768, ideally 1280 x 768 or above
Processor	Minimum Dual Core 2 GHz, Intel Core i5 or AMD A10 A faster processor (i7+) and a higher number of cores (4+) will lead to better screen sharing / online meeting performance and higher video capture resolution
RAM	Minimum 4 GB, ideally 8 GB+ for better online meeting / recording experience
Disk Space	250 GB minimum
Graphics Hardware	Minimum 128 MB graphics memory
Other	DirectX 9 or later

Apple Mac

Operating System	Mac OS X 10.11 El Capitan (for general use) Mac OS X 10.13 High Sierra (for Kaltura / Echo 360 Universal Capture)
Display	Minimum 1280 x 800
Processor	Minimum Dual Core 2 GHz, Intel Core i5 or AMD A10

	A faster processor (i7+) and a higher number of cores (4+) will lead to better screen sharing / online meeting performance and higher video capture resolution
RAM	Minimum 4 GB, ideally 8 GB+ for better online meeting / recording experience
Disk Space	250 GB minimum
Graphics Hardware	N/A

Linux

Please note that some software or services (e.g. proctoring) may not run under Linux.

Operating System	<p>64-bit Linux distribution of:</p> <ul style="list-style-type: none"> • Ubuntu 16.04+ LTS, • Fedora 30+ Workstation • RHEL 8+ Workstation • CentOS 8+ <p>The above are the only Linux distributions officially supported by Microsoft for MS Teams.</p> <p>Zoom supports the following 64-bit distributions:</p> <ul style="list-style-type: none"> • Ubuntu 12.04+ • Fedora 21+ • RHEL 6.4+ • CentOS 6.4+ • Open SUSE 13.2+ • Mint 17.1+ • Oracle Linux 6.4+ • ArchLinux
Display	Minimum 1024 x 768
Processor	<p>Minimum Dual Core 2 GHz, Intel Core i5 or AMD A10</p> <p>A faster processor (i7+) and a higher number of cores (4+) will lead to better screen sharing / online meeting performance and higher video capture resolution</p>
RAM	Minimum 4 GB, ideally 8 GB+ for better online meeting / recording experience
Disk Space	250 GB minimum
Graphics Hardware	Minimum 128 MB graphics memory, support for OpenGL 2.0 or higher

Virtual Machine / Virtual Desktop

Additional requirements when using a virtual machine / virtual desktop. Please note that some software or services (e.g. proctoring) may not run under virtual machine / virtual desktop.

Processor	vCPU with 4 virtual cores minimum
RAM	Minimum 4 GB, ideally 8 GB+ for better online meeting / recording experience
Disk Space	250 GB minimum

iOS / iPadOS

Please note that some software or services (e.g. proctoring) may not run under iOS / iPadOS.

Please check with your faculty / course team / handbook for any additional specific requirements and potential incompatibilities.

We recommend that you update your iOS / iPadOS device to the latest operating system as older versions may not be supported or may not work at all with software / services that you may need to use.

For optimal performance, we recommend at any time the last two versions of iOS / iPadOS (13 and 14 at the time of writing).

Please note that to use blurred background on MS Teams, Microsoft recommend iPhone 7 or later, iPad 2018 (6th gen) or later, iPod touch 2019 (7th gen).

Android

Please note that some software or proctoring services may not run under Android.

Please check with your faculty / course team / handbook for any additional specific requirements and potential incompatibilities.

We recommend that you update your Android device to the latest operating system as older versions may not be supported or may not work at all with software / services that you may need to use.

For optimal performance, we recommend at any time the last three versions of Android (9, 10, and 11 at the time of writing).

Internet connection

To get the best online learning experience, we recommend that you use a reliable unbroken internet connection, ideally over Wi-Fi rather than 4G/LTE.

When discussing internet connection speed, we tend to focus on the download speed, but if you are going to upload content to KEATS or videos to Kaltura, you also need to take into account upload speed.

There are plenty of online tools that enable you to test your download/upload speed, such as the [Broadband Speed Test](#).

Please note that these speeds are usually given in Mbps (megabits per second) which is different from the unit of your file sizes (usually in MB (megabytes) or GB (gigabytes)). One byte is made up of 8 bits of data. You can use online tools to find out approximately how long it would take to upload/download a file of a specific size over a specific speed, such as this [Bandwidth Calculator](#).

Most of our current practice involves group (often video) calling. Microsoft recommends a minimum bandwidth of 1 Mbps upload and 2 Mbps download, while Zoom recommends 2 Mbps upload and 2 Mbps download for single screen (4 for dual screen and 6 for triple screen).

For best performance when participating in online (video) meetings, accessing KEATS / Kaltura content and working on King's shared drives, you require a **minimum of 4 Mbps download and 3 Mbps upload speeds**. Please note that if you are multi-tasking and/or if you have several devices connected to the same internet connection, your requirements will be higher and we therefore **recommend 10 Mbps download and 5 Mbps upload speeds**.

Please be aware that, due to firewalls and other security systems some NHS Trust work-based computers may block access to the King's sites. If you are concerned about this, please contact your local Digital Education team and/or 88888.

Browser

For optimal performance, security and support, we recommend that you use one of the following internet browsers and always run the latest stable version: **Chrome, Firefox, Safari (on Mac), MS Edge (Chromium-based or not)**. To ensure maximum compatibility, we do not recommend the use of Internet Explorer, even IE11.

Make sure to disable Ad blockers and enable cookies, JavaScript and popup windows for the King's domain and for the tools you use.

Software

You should not need to purchase any software for your studies, though you may need to download and be able to install additional free, open-source or College-licensed software. Do ensure that you are always using the latest stable versions.

Please explore these links with guides about downloading and installing tools provided and supported by the College on your computers:

- [Office365 and Trend antivirus](#) are available free for King's students and staff.
- [Microsoft Teams for Synchronous Teaching](#) (includes link to download MS Teams)
- [KEATS](#) (King's E-learning and Teaching Service) is the centrally supported Moodle Virtual Environment (VLE) within King's, accessible via a web browser. KEATS courses have been

created for guidance on the pedagogically appropriate use of tools, detailed how-to information and relevant case studies: [Student KEATS Guidance](#).

- [Using Kaltura Personal Capture](#) (to record presentations and screencasts)
- [Creating Videos with Echo360 Universal Capture: Personal](#) (to record presentations and screencasts)