Choosing a Computer for Using ArcMap

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# **Introduction**

ArcMap is a geographic information system (GIS) program, created by ESRI. ArcMap is one of the most commonly used programs on the Tufts campus for data intensive work.

Choosing a personal computer for ArcMap can be challenging. There are lots of questions to answer:

* What processor do I need?
* How much RAM? What is RAM?
* How much hard drive space? What is a hard drive?
* What screen size?
* Are there any good manufacturers?

At Tufts, faculty, students and staff can install ArcMap on their personally-owned computers.

**To learn more about GIS at Tufts, see this link:** <https://sites.tufts.edu/gis/learning-gis/overview-2/>

# **1.0 Processors**

The first thing we have to address is the processors needed to run ArcMap. If we look to the system requirements for ArcMap 10.7.1 available at the link below from ESRI, we can get an idea of the requirements:

**System requirements:** <https://desktop.arcgis.com/en/system-requirements/latest/arcgis-desktop-system-requirements.htm>

The suggested processer is: **2.2 GHz minimum; Hyper-threading (HHT) or Multi-core recommended**. As this is a minimum, we suggest at least a 3.0 GHz speed with Hyper-threading or multi-core. In general, this means any computers that was released during the last one or two years.

# **2.0 RAM (Memory)**

Memory or random-access memory (RAM) is the place where the computer stores the processes that it is currently working on. If you want to run many programs simultaneously, you will need more RAM. ERSRI suggested at least **Minimum: 4 GB, Recommended: 8 GB or higher.** GB means gigabytes, which is a unit of size for RAM.

# **3.0 Hard Drive (Storage)**

The minimum hard drive space (disk space, also called storage) suggested by ESRI is **Minimum: 4 GB, Recommended: 6 GB or higher.** In reality, a hard drive of 500 GB or 1 TB (terabyte) is large enough for most users who are using the machine as students or researchers. Reserving at least 6 GB of free space for ArcMap, and any additional data you may have, is suggested.

# **4.0 Screen Size and Resolution**

The size (length and width) and the resolution (density of pixels that display content) matter for how maps and the interface will look on the screen. Recommended: 1024x768 recommended minimum at normal size (96 dpi).

# **5.0 Manufacturers**

One has many options when selecting a manufacturer of a laptop. Sites like Notebookcheck and Consumer Reports provide reviews of laptops in the US.

* **Top 10 Office Laptops:** <https://www.notebookcheck.net/Notebookcheck-s-Top-10-Premium-Office-Business-Notebooks.98925.0.html>
* **Laptop Buying Guide**: <https://www.notebookcheck.net/Our-definitive-laptop-buying-guide.2559.0.html>