**Hardware Specification Requirements**

We highly recommended that you request a consultation through CNS IT as we can save you trouble in the long run, we will rarely tell you can't purchase a computer if it meets security requirements but we will help point out risks that you should consider when purchasing the new computer.

### Minimum Security Requirements

Please note for the computer to be allowed on the UT network or be used for university work it must abide by the IRUSP.

The system must allow for full disk encryption to meet the minimum security requirements:

1. All Apple hardware post-2012 support this.
2. These Dell computers support full disk encryption (See "What Dell model computers have a TPM/Intel PTT?"). All predefined computers in the UT Market Dell punch out support full disk encryption.
3. A system that notes it has a TPM Chip will support full disk encryption.
4. A drive that notes it is “self-encrypting” will support full disk encryption.
5. If the system doesn't match any of the above feel free to reach out to CNS IT for a consultation.

### Requirements for both Mac/PC

1. This is an oversimplification of the components to consider when ordering:
   a. Spinning Hard Drive (HDD)/Solid State Drive (SSD): We recommend getting at least 50% more space than what you are currently using. A spinning hard drive is much slower than a solid state drive (SSD) while it is cheaper if you purchase this option then the computer will be noticeably slower and is not recommended. A fusion drive is a mix between the two, it's still not as fast as an SSD but it's slightly faster than a spinning disk.
   b. Random Access Memory (RAM): We recommend at least 16GB of RAM. If you do a lot of data processing (especially large files) or photo/video editing we recommend more.
   c. Central Processing Unit (CPU): This is the brain of the computer, the higher the speed the faster the computer. Speed is determined by a combination of generation and GHz, it is recommended to use a site such as this to compare available CPUs.
   d. Graphics Processing Unit (GPU): For most administrative functions a standard GPU will work, if you do any high graphics or computation work that utilizes the GPU, you may want to spec a higher grade GPU.
2. Please take into account that as more features are added to later releases of the operating system it will require more of the above resources. If you ever wonder why your computer is running slower as the years go on this is the primary reason why.
3. If you over-spec in one area but under spec in another area, depending on how you are using the computer this may become an unnecessary bottleneck. It is recommended to consult with CNS IT to confirm the specs line up with what your needs are.

### Mac Requirements

1. Most Apple hardware is designed to not allow RAM, CPU, GPU, and some SSD later to be replaced so it is recommended that you spec what you will need for the next 3-5 years and not what you need now.
2. The repair of apple hardware is very expensive so it is highly recommended you purchase apple care.
3. MacOS Catalina does not support 32-bit applications, if you are running any of these we may not be able to roll the new computer back to an older OS. You may have to purchase virtual software like Parallels to run a virtual machine that can host these applications. If that is the case, you will be running a computer inside of a computer so it is highly recommended to get at least 1.5x more RAM and SSD than what you think you will need for the host machine.

### PC Requirements

1. We generally do not recommend choosing a non-dell enterprise/business line computer for the following reasons:
   a. The imaging (installing software/configuring it to work with UT systems) has to be done manually, so it will take a week longer than a normal deployment. This also means it will take this long if we have to wipe and redeploy it due to a virus or other major issue.
   b. Dell's warranty is one of the best, if something goes wrong on the system, they will drop ship a part and we can replace within one business day or have an onsite tech show up the next business day from dell to repair the system, you don’t get that with other vendors.
   c. Dell has a consumer line with cheaper products. We ask that you refrain from selecting these as they are not truly designed to handle daily administrative computing needs. These are low computing systems and do not conform to most of the noted security requirements listed above.
2. It is highly recommended for warranty to be purchased on the computer if you rely heavily on this system. More often than not, hardware failures create unnecessary productivity, data retention, or outage headaches. Some things to look for in a warranty include:
   a. One that addresses the hardware issue within a reasonable time (some may require you to ship the computer to a warehouse and you will be without a computer for a few weeks).
   b. One that will cover accidental damage either for free or with a small fee.
   c. One that will allow you to keep your hard drive if the hard drive fails. If it contains confidential information (ex: student records, sensitive research data, financial information, etc), it cannot be shipped back to the vendor. You will need to purchase a brand new hard drive to send back to them and your drive can be properly destroyed through your local IT.
3. When you aim for a cheaper computer, you are usually getting cheaper parts, parts that were released years ago, or refurbished parts which means they have a higher chance failure. Systems of this nature outlive their use much sooner than a properly spec'd system.

4. Some systems will allow you to add additional components later (ex: more ram or hard drive space). Yet many are being sold with these components soldered on-board. We recommend buying what you will need in 3-5 years not what you need today.