

# The University Senate of Michigan Technological University

## Proposal 12-23

### Update Student Computing Device Requirements (Voting Units: Academic Only)

Submitted by Senate Information Technology Committee

#### I. Introduction

[Proposal 62-20](#) required students to have a portable computing device. The current requirements are documented on the university website at <https://www.mtu.edu/it/help/computing-device/>. The Senate has not updated the computing device specifications since proposal 62-20 was passed and approved by the administration in June 2020. Changing computer technology and IT's experience with helping students with their computing devices suggests that the requirements should be updated.

Proposal 62-20 indicates that the requirements must be changed by March 1 to apply to the following academic year. ~~Individual departments and programs can update their own computing device requirements by February 1 if they wish for them to apply to the following academic year.~~ Departments and programs can add or update their own minimum computer specifications by March 1 to apply to the following academic year.

#### II. Proposed Changes and Rationale

The following changes to computer requirements will apply to incoming students beginning Fall 2023. Current students can upgrade machines that do not meet the new requirements if they wish to, but they are not required to do so.

#### Required **Minimum** Computer Requirements starting in Fall 2023:

	<b>Current</b>	<b>Proposed</b>
<b>OS</b>	University wide: Unspecified* *Departments can specify different OS requirements	University wide: Windows 11* *Departments can specify different OS requirements
<b>Processor</b>	Intel i5 or AMD Ryzen 5	Intel i5 or AMD Ryzen 5 (most recent generation or the previous generation)

<b>Memory</b>	8GB RAM	16GB RAM
<b>Storage</b>	250GB (Solid State Drive (SSD) strongly recommended)	512GB SSD
<b>Graphics</b>	Integrated graphics	Any (i.e., integrated or discrete/dedicated graphics card)  <b>See Section IV</b>
<b>Other</b>	<ul style="list-style-type: none"> <li>• 1 TB external drive recommended for backup and additional space. Google drive also available for storage and backup of important documents</li> <li>• HDMI output or HDMI adapter to connect to classroom facilities</li> <li>• Wireless adapter capable of 802.11ac</li> <li>• Built-in or external webcam, and headphones with connected microphone.</li> <li>• Must be portable enough to bring to class on a daily basis.</li> </ul>	<ul style="list-style-type: none"> <li>• 1 TB external drive recommended for backup and additional space. Google drive also available for storage and backup of important documents</li> <li>• HDMI output or HDMI adapter to connect to classroom facilities</li> <li>• Wireless adapter <b>(See Section IV)</b></li> <li>• Built-in or external webcam, and headphones with connected microphone.</li> <li>• Must be portable enough to bring to class on a daily basis.</li> </ul>

**Rationale for changes to minimum requirements**

- **Operating System:** When Proposal 62-20 passed, no particular OS was required university-wide, but individual units could specify their own device requirements. Some units elected to require Windows (College of Engineering) or to allow either Windows or MacOS (VPA and Humanities). We propose requiring Windows 11 unless a unit specifies otherwise. Windows works reliably with AppsAnywhere, it is the most commonly used OS, and IT is most familiar with supporting it. Running Windows 11 in a virtual machine is more complex and does not work as well as running it natively. Windows 11 was released in June 2021 and is installed by default on the vast majority of new machines sold today. Windows 10 reaches end of support in October 2024. Ensuring students start with an up-to-date OS reduces the need for them to update the OS before they graduate.
- **Processor:** The language has been updated to clearly indicate that a recent processor is required. A ten-year-old Intel i5 is not sufficient, for example.

- **Memory:** Increasing the memory requirement aids in multitasking when running multiple resource-intensive programs. An increase will help future-proof the device for students.
- **Storage:** It is becoming less expensive to have more storage space. If students run out of storage, it is not easy to carry around an external drive or upgrade the disk, migrate files, etc. Some software uses a significant amount of space.

### Required **Recommended** Computer Requirements starting in Fall 2023:

	<b>Current</b>	<b>Proposed</b>
<b>OS</b>	University wide: Unspecified* *Units can specify different OS requirements.	University wide: Windows 11* *Units can specify different OS requirements
<b>Processor</b>	Intel i7 or AMD Ryzen 7 or 9	Intel i7 or AMD Ryzen 7 or 9 (most recent generation or the previous generation)
<b>Memory</b>	16GB RAM	24GB RAM or more
<b>Storage</b>	512GB (Solid State Drive (SSD) strongly recommended)	1TB SSD
<b>Graphics</b>	Dedicated graphics card with at least 4 GB of VRAM	<i>(unchanged)</i>
<b>Other</b>	<i>(Same as "Other" listed in minimum requirements above)</i>	<i>(Use the same proposed text in the minimum computer requirements above).</i>

### Rationale for changes to recommended requirements

- **OS and Processor:** Updated for similar reasons described in the minimum requirements.
- **Memory and Storage:** Increased to be above the new minimum requirements.

### Estimated cost of a new laptop meeting requirements:

Computing devices are an additional financial burden on students. Therefore, we investigated how much a new laptop might cost that meets the requirements. The two machines listed below from dell.com meet the new requirements. Although we priced the machines from dell.com, we do not recommend or suggest any one particular brand or model of laptop.

**Minimum Requirements:** As of November 2022, a Dell Inspiron 15 laptop with Windows 11, 12th generation Intel i5 processor, 16GB RAM, 512GB SSD costs approximately \$650 on dell.com (as of November 2022).

**Recommended Requirements:** As of November 2022, a Dell Alienware x14 Gaming Laptop with Windows 11, 12th generation Intel i7 processor, 32GB RAM, 1TB SSD, NVIDIA GeForce RTX 3060 6GB costs approximately \$1,700 on dell.com (as of November 2022).

### III. Impact to program- and department-specific computing device requirements

Programs and departments can define their own computing device requirements. Proposal 62-20 did not say if departments could specify computing devices with specifications lower than the university's minimum requirements. We propose that the hardware for all program/department specific requirements must be comparable to or exceed the newly proposed university minimum requirements.

**How does this proposal impact existing program- and department-specific device requirements?** Requirements specific to Humanities and VPA would be updated to require a recent generation of the processor. The memory requirements for both would be increased from 8GB to 16GB. In addition, students majoring in engineering, mechanical engineering technology, and engineering management must have a Windows device under the current requirements. This proposal would make that exception unnecessary.

### IV. Simplifications to Requirements

The tables above reflect two additional simplifications to the requirements. In particular, there is no need to list specific requirements when we expect that any device meeting the other requirements would have such support.

- **Other:** Instead of requiring 802.11ac WiFi support, simply require that the device supports WiFi. Any recent machine with WiFi support should be sufficient.
- **Graphics:** In the minimum requirements, the existing requirements specify "integrated graphics". This effectively means that any kind of graphics hardware is sufficient. We recommend changing the language to: "Any (i.e., integrated or discrete graphics cards are sufficient)"