LAPTOP REQUIREMENT GUIDE

TANDON

2017-2018
WHAT ARE THE REQUIREMENTS OF THE NYU SCHOOL OF ENGINEERING’S LAPTOP PROGRAM?

The NYU Tandon School of Engineering requires that all students without exception have an appropriate laptop computer when they commence classes and for the duration of their matriculation. Your laptop is an integral and invaluable tool in your education at Tandon. As such,

1. You must have a laptop that can support the required software of the School of Engineering’s academic program by the first day of classes.

2. You must register your laptop prior to using it on the School of Engineering’s network by visiting the Laptop Help Desk (located in Rogers Hall, Room 339).

This document will discuss how to meet the requirements of the School of Engineering’s Laptop Program.

REQUIRED SOFTWARE

As most of the Engineering applications are Windows-based, we highly recommend that a Windows laptop be used for your studies at the School of Engineering. As such, we are requiring the Windows operating system. Your laptop must have Windows 10 installed.

NOTES FOR APPLE MACBOOK BUYERS: Even though the Windows OS is a requirement for this program, students who prefer to purchase an Apple MacBook to meet the laptop requirement can certainly do so. However, you must have some version of the Windows OS installed on your MacBook to run the required software. To install Windows on a MacBook, it requires an Intel-based processor and you can run Windows in one of two ways: (1) Boot Camp utility — it lets you run Windows & Windows-based apps on a separate partition of your hard drive OR (2) Virtual software — software such as Parallels, VMware Fusion, Sun Virtual Box, etc. allows users to run Windows & Mac apps at the same time. Additional information about using Boot Camp and the specific requirements can be found on the Apple website (http://support.apple.com/kb/HT1461).

All incoming undergraduate first-year students are required to have the following software installed on their laptops by the first day of classes:

- Microsoft Office or compatible office productivity suite such as OpenOffice or WordPerfect Office
- Microsoft Visual Studio
- Anti-virus software with maintained virus definitions
- LEGO Mindstorms
- MATLAB
Microsoft Office is not required but strongly recommended given its level of adoption within the School of Engineering. Transfer students may not need all the software listed above.

For all students, dependent upon your academic program and the courses you undertake in later years, you may be required to purchase additional software packages such as the following:

- CAD design software such as AutoCAD or SolidWorks
- Additional “toolboxes” for MATLAB (this can be obtained directly from MathWorks or via a vendor with whom we’ve negotiated pricing for faculty & students, A-Prompt)

The cost of such later requirements will generally be comparable to the cost of a textbook. Whenever possible, you can make use of any software discounts or group licenses that the School of Engineering has arranged.

YOU MUST RESPECT COPYRIGHT AND SOFTWARE LICENSE AGREEMENTS.

A software license is a type of proprietary or gratuitous license as well as a memorandum of contract between a producer and a user of computer software that specifies the parameters of the permission granted by the producer to the user. All software is protected under United States copyright laws from the time of its creation.

You are required to have valid, licensed copies of all software on your laptop and use this software within the rights granted to you by those licenses. Violation of software licenses or copyright is a violation of the School of Engineering’s Acceptable Use Policy. In addition, violation of software licenses or copyright is illegal and severe civil and criminal penalties can result.

Should violation of software licenses be detected, the Information Technology Department will refuse technical support, disable one’s ability to connect to the University network, and refer the matter to the Dean of Student Affairs for judicial action.
WHAT OPTIONS EXIST FOR OBTAINING REQUIRED SOFTWARE?

There are two options for obtaining required software:

<table>
<thead>
<tr>
<th>OPTION</th>
<th>EXPLANATION</th>
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<tbody>
<tr>
<td>Obtain the software for $225 from the School of Engineering’s Laptop Help Desk</td>
<td>The School of Engineering’s Laptop Help Desk will load on your laptop a software package bundling, not only the required software, but additional productivity software for a fee of $225. The software package includes the following: Microsoft Word</td>
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<td></td>
<td>Microsoft Excel</td>
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<td>Microsoft Outlook</td>
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<td></td>
<td>Microsoft PowerPoint</td>
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<td>Microsoft Publisher</td>
</tr>
<tr>
<td>Obtain the software independently</td>
<td>You have the option of trying to obtain the best pricing arrangement possible via other vendors. This option is not recommended given the lower cost of licenses we have negotiated, but the option is yours. Though you may purchase the required software from any vendor, we have made arrangements with A-Prompt Corporation and the NYU Bookstore for discount pricing on required software for students and faculty of the School of Engineering. Their contact information is as follows: A-Prompt Corporation</td>
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</table>

IF YOU NEED TO PURCHASE A LAPTOP COMPUTER

If you don’t have a laptop computer or need to purchase a new one in order to meet the requirements of the School of Engineering’s required academic software, there are two options for its purchase:

I. YOU MAY PURCHASE A LAPTOP COMPUTER THROUGH AN ARRANGEMENT WE HAVE MADE WITH A SPECIFIC VENDOR.

This arrangement is advantageous for the following reasons:

- These laptops are known to meet the School of Engineering’s recommended hardware specifications and have been configured with the goal of providing at least four years of useful life.
- These laptops have been discounted under our arrangement with the vendor.
- The vendor is familiar with the School of Engineering’s Student Laptop Program Requirements.
To purchase a laptop using the approved vendor, please go to the specific website below to purchase the laptop.

**NYU Computer Store:**
www.bookstores.nyu.edu

- Follow the Computers & Tablets link to see all available options.

### 2. YOU MAY PURCHASE A LAPTOP COMPUTER MEETING THE HARDWARE SPECIFICATIONS DESCRIBED BELOW VIA ANOTHER RETAILER.

**When purchasing a new computer, you’re making an investment in something you’ll most likely be using throughout your four years at the School of Engineering.**

With this in mind, please carefully consider the following advice. Though some items involve greater initial cost, they may save you money over time.

- A one year warranty is often the standard warranty. If it is possible to add an additional 2–3 years coverage, you should strongly consider purchasing an extended warranty to avoid potentially costly time & materials, repairs after the warranty expires, or the need to replace the laptop.

- Warranties only cover defects in the laptop, but not theft or damage due to accidents. You may wish to look into accident insurance via the laptop vendor or a personal insurance policy.

- Software requirements for hardware performance, memory, and storage can be expected to increase across the span of your academic career at the School of Engineering. Purchasing a laptop with a “higher end” specification will more likely provide greater utility over time.

- Better laptops provide a metal alloy composite casing to better protect their LCD displays and other internals. LCD displays can be very costly to replace. Thus, we recommend you purchase a laptop with such a casing.

- Your selection of features above the minimum configuration should be based upon your own preferences and plans. In some cases, you may be planning an upgrade at a later date.

- Purchase a laptop lock that you can use to secure your laptop should you step away from it.

- Purchase a laptop case or laptop bag solely for storage and protection. Never store your laptop along with your books and other things as this will damage your laptop.

For the 2017–2018 academic year, we recommend that a newly purchased laptop meet the “Minimum Hardware Specification” detailed below. To better ensure that a new laptop meets the requirements of your academic program throughout your four years, you may wish to purchase a laptop meeting the “Recommended Hardware Specification” below.

The prices above are representative only. Federal regulations allow students and/or parents to borrow loans to assist in the financing of computers and required software. After purchasing your computer and/or software, if you wish to obtain a student loan to receive reimbursement for the initial outlay of funds,
please provide the Office of Financial Aid with a copy of your receipt at the time of the loan application. If you have any questions you may contact the Office of Financial Aid at financial.aid@nyu.edu.

### IF YOU NEED ASSISTANCE WITH YOUR LAPTOP

<table>
<thead>
<tr>
<th><strong>MINIMUM HARDWARE SPECIFICATION</strong></th>
<th><strong>RECOMMENDED HARDWARE SPECIFICATION</strong></th>
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<tbody>
<tr>
<td><strong>Processor</strong></td>
<td>Intel® Core™ i5 CPU (7th Gen)</td>
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<tr>
<td></td>
<td>Intel® Core™ i7 CPU (7th Gen)</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>8 GB DDR-RAM</td>
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<tr>
<td></td>
<td>16 GB DDR-RAM (or more)</td>
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<tr>
<td><strong>Display</strong></td>
<td>14” LED display</td>
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<tr>
<td></td>
<td>15” to 17” HD LED display</td>
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<tr>
<td><strong>Storage</strong></td>
<td>500 GB SATA or 256 GB SSD HDD, DVD-RW/DVD Combo Drive</td>
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<td></td>
<td>1 TB SATA or 512+ GB SSD HDD, DVD-RW/DVD Combo Drive</td>
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<tr>
<td><strong>Network/Communications</strong></td>
<td>Integrated 802.11a/c wireless, Integrated Gigabit Ethernet, USB 3.0 ports</td>
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<td>Integrated 802.11a/c wireless, Integrated Gigabit Ethernet, USB 3.0 ports</td>
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<tr>
<td><strong>Power</strong></td>
<td>Lithium-ion battery (6 hr capacity/3 cell battery)</td>
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<td></td>
<td>Lithium-ion battery (10 hr capacity/9 cell battery)</td>
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<tr>
<td><strong>Operating System</strong></td>
<td>Windows 10</td>
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<td></td>
<td>Windows 10</td>
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<tr>
<td><strong>Warranty</strong></td>
<td>3-yr Warranty and Accidental Protection</td>
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<tr>
<td></td>
<td>4-yr Warranty and Accidental Protection</td>
</tr>
<tr>
<td><strong>Estimated Cost (Includes the School of Engineering’s Licensed Software, but not taxes &amp; shipping)</strong></td>
<td>$1,200 (and above)</td>
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</tbody>
</table>
FREQUENTLY ASKED QUESTIONS

I ALREADY HAVE A LAPTOP. CAN I USE IT INSTEAD OF PURCHASING A NEW LAPTOP?
If your current laptop meets or exceeds the minimum hardware configuration mentioned in this guide, then you do not need to purchase a new machine. However, as new software is released and required in your coursework, you may need to upgrade or replace your laptop.

WHAT CAN BE INCLUDED IN THE ESTIMATED COST OF EDUCATION FOR LOANS AND FINANCIAL AID?
The costs of hardware and software purchased in order to meet the laptop program requirements may be included in the estimated cost of education for loan and financial aid considerations. For more information, please contact the Office of Financial Aid at financial.aid@nyu.edu.

MUST I USE THE VENDORS WITH WHOM YOU’VE MADE AN ARRANGEMENT?
No. The vendors with whom we negotiated discounted prices for your benefit is an option, not a requirement. They are familiar with our program and its implementation. The decision of whether to use them is yours. You will probably want to compare prices, convenience, and other factors. They are an excellent starting point for your price comparisons. The decision, however, is yours.

WHAT IS THE RATIONALE BEHIND THE MINIMUM AND RECOMMENDED HARDWARE REQUIREMENTS?
• **CPU:** The Intel® processor is widely used in laptop computers. If you choose a laptop with a different CPU, be sure to pay attention to expected battery life and its performance in industry-standard benchmarks.

• **Display:** You’ll be spending a lot of time looking at your laptop’s display, so quality is an important issue. In general, the larger the size and the higher the resolution, the better. On the contrary, the display size is more like a personal preference. A larger screen size will add more weight and make the laptop less portable.

• **Memory:** The current versions of the Windows OS are designed to handle a large amount of main memory, and recent experience has shown that with the desire to run multiple applications at once and the increased use of streaming video and digital music, more memory means better performance. Given the current pricing for main memory, 8GB is the minimum you should consider.

• **Hard Drive:** Given the growing use of streaming audio, video and multimedia applications, the general rule of thumb is “the bigger the better.” We recommend having at least a 500 GB SATA or 256 GB SSD hard drive. Additionally, you should invest in an external USB hard drive for more storage and backup purposes.

Solid State Drives (SSD) are another viable alternative in lieu of a traditional hard disk drive. SSDs are more durable, use less power and are quicker to boot up, transfer files, and launch applications in comparison to a regular HDD.
Currently, SSDs are more expensive per gigabyte of storage compared to a HDD. You’ll need to decide whether having a SSD is worth the extra cost now or wait to upgrade at a later time.

• **CD-RW/DVD Drive:** A DVD-RW drive is useful if you still prefer to watch DVD movies on the laptop or write to a DVD disk. It is also a nice option to have in case you need to create a bootable disk when needed. Most laptops come with an internal optical drive but you can opt for an external one if you only need to use it occasionally.

• **Wireless:** Students will have the ability to connect to NYUroam, NYU’s secure wireless network at the School of Engineering campus and other NYU locations. To connect at optimal speeds, your laptop must support the IEEE 802.11 a/c standards and WPA Enterprise or WPA2 encryption.

• **USB:** A typical laptop these days has a combination of both USB 2.0 & USB 3.0 ports installed. USB 3.0 is the latest standard. Most new computers and devices being manufactured today support USB 3.0. The data transfer rate is 10 times faster than a USB 2.0 and it is backwards compatible with USB 2.0 drives/devices. As the popularity of USB devices and use increases, it is recommended to purchase a laptop with numerous USB ports and you should consider getting USB 3.0 exclusively.

• **Battery:** This is one of the most critical parts of your laptop. Many students like to work in places where there is no electrical power (e.g. coming in on the train or subway in the morning, sitting in the park outside Rogers Hall), so having a good battery is extremely important. Lithium Ion technology currently has the greatest battery life. In fact, you might consider buying a booster battery as well. After you acquire your laptop, be sure to read the manual on how to prolong battery life, and follow the manufacturer’s recommended practices.

• **Case:** A metal alloy case is extremely desirable. Students usually keep their laptops in a backpack or similar arrangement, and have damaged their displays due to pressure on the case of the laptop. A metal alloy case will resist this damage more effectively. In addition, there are slip cases you can buy for your laptop in computer accessory departments which may help minimize this damage. Buying a laptop with a normal plastic case and putting it in a case with other items (e.g. textbooks) is not practical.

**MORE QUESTIONS?**

• For questions about the laptop program or other technical matters, please send an email to soehelpdesk@nyu.edu. Make sure to check the Information Systems website for updates at the following website: http://engineering.nyu.edu/services/information-technology-systems/laptop
• For questions regarding the purchase of a laptop through our recommended vendor, please contact the NYU Bookstore whose information is provided at the following website:
  
  **NYU Computer Store**: [http://www.bookstores.nyu.edu](http://www.bookstores.nyu.edu)

• For questions related to any other aspects of your admission or the School of Engineering’s academic programs, please contact the Admissions Office at [advisement@nyu.edu](mailto:advisement@nyu.edu)