

EQUIPMENT REQUIREMENTS FOR INCOMING ENGINEERING STUDENTS

Most engineering courses require the use of modern computer tools and/or programmable calculators widely used by professional engineers. Therefore, all entering freshmen and transfer students who declare an engineering major are **required** to provide for themselves the following equipment.

Graphing Calculator

- The calculator must be capable of performing complex number and matrix operations.
- Recommended: TI-89 (any version)
- Other options:
 - TI 83 Plus and 84 Plus
 - Casio CFX-9850G Plus and above, fx-9750G and above, fx-CG10 and above
 - HP Prime
- *Unacceptable*: TI Nspire
- **Please label your calculator with your name and contact information.**

Personal laptop computer

- See the Computer Recommendations below.
- **Please label your laptop with your name and contact information.**

Required Software

- Microsoft Windows 11.
- Microsoft Office (Word, Excel, PowerPoint)
- MATLAB
- These software packages, as well as others, are available at no cost to Baylor students. Information can be found on the University [Software](https://helpdeskplus.web.baylor.edu/software) (<https://helpdeskplus.web.baylor.edu/software>) web page. Bear ID and password will be required to view some of the pages.

Additional course-specific items

- EGR 1301 – Fall:
 - SolidWorks – student license provided by ECS
 - Arduino project kit – \$30-\$50 purchase
- EGR 1302 – Spring:
 - MATLAB Student Edition – student license provided by Baylor
- Details will be provided in the syllabus of each course.

Helpful links:

- Baylor Helpdesk+ (<https://helpdeskplus.web.baylor.edu> -> Hardware)
 - Provides links to computer hardware discounts, details about personal computer repairs and campus wide printing information via PawPrints.
- Home software for students (<https://helpdeskplus.web.baylor.edu/software>)
- New Student Websites:
 - Libraries' New Student Website (<https://library.web.baylor.edu/newstudent>)
 - Baylor ITS (<https://helpdeskplus.web.baylor.edu/newstudent>)
- The Baylor Bookstore <http://www.baylor.edu/bookstore/>.
 - Staff at the bookstore may be able to provide assistance with software selection and installation.

COMPUTER RECOMMENDATIONS

This list of *recommendations* is provided to assist students and parents in determining how to meet the requirements of the engineering programs at Baylor University. We will do our best to ensure that it is correct and up to date; however, **we are not responsible for decisions made using this information.**

Recommended laptop specifications:

	<i>Windows Laptops</i>		<i>MacBooks</i>	
	<i>Minimum</i>	<i>Recommended</i>	<i>Minimum</i>	<i>Recommended</i>
Operating System	Windows 11 (64-bit)	Windows 11 (64-bit)	MacBook Pro with MacOS 12 Monterey	MacBook Pro with MacOS 14 Sonoma
Processor	Intel Core i5	Intel Core i7	Intel or ARM	MacBook Pro with ARM processor
RAM	16 GB	32 GB	16G	32G+
Hard Disk	500 GB SSD	1 TB SSD	512G	1TB+
Display	1366x768 or better	1920x1080 (HD) or better	Built-in	Built-in
Wireless Network	Built-in	Built-in	Built-in	Built-in
Ports	1 USB-A port (or USB-C port with adapter)	Multiple USB ports (at least 1 USB-A or adapter)	1 USB-C to USB-A adapter	1 USB-C to USB-A adapter

- The laptop must be able to connect to Baylor's "[Airbear](https://helpdesklplus.web.baylor.edu/network-phone/airbear-wireless-network)" (<https://helpdesklplus.web.baylor.edu/network-phone/airbear-wireless-network>) wireless network.
- The laptop must be capable of supporting Microsoft Windows 11 and the **simultaneous** operation of Microsoft Office, MATLAB, and an internet browser (Firefox, Chrome, Edge, etc.).

Keep in mind that many engineering applications are ONLY supported on Windows operating systems. Students using MacBook's will be required to install these programs in a Windows environment, requiring the purchase of a copy of Parallels for use on their systems. We **HIGHLY** recommend using the professional version of Parallels as it allows access to the graphics processors on the M-series chips. Copies are available at the Baylor Bookstore for a reduced cost. (<https://www.bkstr.com/baylorstore/product/parallels-desktop-for-mac-pro-academic-1-year-subscription---esd-400975-1>)

- Given the performance boosts that come with the with the MacBook Pro's we highly encourage students wanting to use a Mac to use the MacBook Pro over the MacBook Air.

The recommendations above are largely based on the ability to run the following programs:

- SolidWorks 3D CAD
 - <https://www.solidworks.com/support/system-requirements>
 - <https://www.solidworks.com/support/hardware-certification/>
- Matlab - http://www.mathworks.com/support/sysreq/current_release/
- LabVIEW - <https://www.ni.com/docs/en-US/bundle/labview/page/labview-requirements.html>
- Xilinx Vivado
 - <https://docs.amd.com/r/en-US/ug973-vivado-release-notes-install-license/Important-Information>
 - See also the latest version Release Notes