

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 10. Testing of application support with Windows 11 is ongoing.
- 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://www.baylor.edu/helpdesk/software) (<https://www.baylor.edu/helpdesk/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+ (<http://www.baylor.edu/helpdesk> -> Hardware)
 - Provides links to computer hardware discounts, details about personal computer repairs and campus wide printing information via PawPrints.
- Home software for students (<https://www.baylor.edu/helpdesk/software>)
- [Baylor Libraries' New Student Website](https://www.baylor.edu/library/newstudent) – (<https://www.baylor.edu/library/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>Minimum</i> | <i>Recommended</i> |
|------------------|---|--|
| Operating System | Windows 10 (64-bit) | Windows 10 (64-bit) |
| Processor | Intel Core i5 | Intel Core i7 |
| RAM | 8 GB | 16 GB |
| Hard Disk | 500 GB, 7200 RPM | 1 TB SSD (solid state drive) |
| Display | Resolution of 1366x768 or better | Resolution of 1080p or 1920x1080 (HD) or better |
| Wireless Network | 802.11 g | 802.11 a/g/n/ac |
| Optical Drive | <i>Optional</i> | <i>Optional</i> |
| Ports | 1 USB-Aport (or USB-Cport with adapter) | Multiple USB ports (at least 1 USB-A or adapter) |

- The laptop must be able to connect to Baylor's "Airbear" (<https://www.baylor.edu/helpdesk/airbear>) wireless network.
- The laptop must be capable of supporting Microsoft Windows 10 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 laptops will be required to install these programs in a Windows environment (either dual boot or virtual machine). Newer MacBooks use Apple's ARM based processors. Microsoft does not officially support running Windows 10 operating systems on the ARM platform. A version of Windows 11 is available for deployment on ARM processors. Additional details can be found on Microsoft's site. Resolution of compatibility problems and the cost of the virtual machine software is solely the responsibility of the student. **Therefore, unless the student already has a MacBook laptop, it is strongly recommended that the student arrive on campus with a Windows-based laptop for class needs.**

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

- SolidWorks 3D CAD
 - <http://www.solidworks.com/sw/support/SystemRequirements.html>
 - <http://www.solidworks.com/sw/support/videocardtesting.html>
- Matlab
 - http://www.mathworks.com/support/sysreq/current_release/
- LabVIEW
 - <http://www.ni.com/labview/requirements>
- Xilinx Vivado
 - <https://www.xilinx.com/products/design-tools/vivado/memory.html>
 - See also the latest version Release Notes