

Bringing your own Personal Computer
(For undergraduate students entering in 2020)

At Tohoku University, personal computers are used for many everyday academic activities, such as registering for classes, checking grades, viewing class syllabuses, distributing class materials, preparing and submitting reports, and general communication.

Please be ready to bring a computer to class if the instructor asks you to do so.

- Computer requirements are shown in "Table 1: Minimum Specifications."
 - ※ Please also be sure to check "Table 2: Undergraduate/Graduate School Requirements" for requirements for your specific undergraduate/graduate school (department/major etc.).
- If you are unable to purchase a computer for financial reasons, the university has a long-term loan program.
 - ※ For details, please see the link to "Using Student-owned Computers for Educational Activities" below.

OS (operating system)

Your computer must run at least Windows 10 or Mac OS Mojave (10.14).

- ※ Your undergraduate/graduate school may have other OS requirements. Please see Table 2 for details.

Anti-virus software

You can install Computer Protection (from F-Secure) free of charge under Tohoku University's campus-wide license after you enroll. Use of F-Secure software is not mandatory. You can use another commercial anti-virus product or Windows 10's built-in Windows Defender if you prefer.

Office software (word-processing, spreadsheet, and presentation software)

The university is preparing a campus-wide licensing agreement with Microsoft for use of Microsoft Office365. (The agreement should be ready by July 2020.)

After Office365 becomes available, all students who have personal computers will be able to use the latest Microsoft Office software whether or not they have computers with MS Office installed.

Until the end of June 2020, after which the campus-wide Microsoft license will become available, all students can use Google LLC's office tools (Docs, Sheets, and Slides), or use the MS Office products installed on the computers in the ICL rooms.

Reference: Using Student-owned Computers for Educational Activities (the website is in Japanese; PDFs are bilingual Japanese/English)

http://www2.he.tohoku.ac.jp/zengaku/zengaku_byod.html
(or, from the Japanese Tohoku University website,
click → 教育・学生支援 → 全学教育 → 学生への情報 → その他)



Table 1: Minimum Specifications

	Recommended	Minimum (minimum necessary requirements)
OS	At least Windows 10 or Mac OS Mojave (10.14)	
CPU	Intel Core i5 (6th generation) equivalence or better CPU (See "Reference" below.)	
Memory	8 GB or more	4 GB or more
Mass storage (hard disk)	240 GB or larger SSD	128 GB or larger SSD
Wireless LAN	Ability to connect to Wi-Fi (IEEE802.11a, 802.11n, or 802.11ac)	
Battery life	5 hrs. or longer according to manufacturer	
Display	11-inch or larger	
Input	Keyboard (QWERTY layout; detachable/external keyboards are fine)	
External interface	<ul style="list-style-type: none"> • USB 2.0 or higher • External display port (including those requiring adapters) • Earphone/mic (please purchase earphones/mic yourself) • Web camera (external USB cameras are fine) 	
Other	<ul style="list-style-type: none"> • Since you will be carrying the computer with you, we recommend you choose a thin/light model. • Internal optical drives add weight. If you require one, we recommend using an external drive. 	

※ The above "Minimum" indicates minimum requirements for all faculties.

※ Please also be sure to check ["Table 2: Undergraduate/Graduate School Requirements"](#) for requirements for the specific undergraduate/graduate school (department/major etc.) you are entering.

Criteria

The minimum specifications are based on the below use cases assumed for classes:

- Viewing online reference materials (including videos) hosted on specified servers
- Using office software to edit documents (presentation materials, reports, etc.)
- Recording and submitting reports in video form (excluding video editing)
- Performing basic programming and computation on cloud servers

Reference

- Intel Core i5 (6th generation) or equivalent includes Intel Core i3 (7th generation) or better CPUs.
- Intel CPU labeling conventions are as follows (example: Core i5 7020U)

Label	Maker	Brand	Grade	Model Number	Suffix
	Intel	Core i	5	7020	U
Notes		Often referred to as the "Core i" series.	There are grades other than i5, such as M, i3, i7, and i9.	The first number is the generation.	Denotes other CPU characteristics.
Comments	<ul style="list-style-type: none"> • In general the higher the Grade and Model (generation) numbers, the higher the CPU's performance will be. 				

※ The University Co-op (New Student Life Support Center) sells computers that meet the "Recommended" specification shown above.

Table 2: Undergraduate/Graduate School Requirements

Faculty/department		Notes from the faculty/department on PC requirements	
Arts and Letters		Must meet the "Minimum" specifications shown in Table 1.	
Education		Must meet the "Minimum" specifications shown in Table 1.	
Law		Must meet the "Minimum" specifications shown in Table 1.	
Economics		<u>Must meet the "Recommended" specifications shown in Table 1.</u> Windows 10 PCs are preferred.	
Science	Mathematics	Must meet the "Minimum" specifications shown in Table 1.	
	Physics/ Astronomy and Geophysics	Must meet the "Minimum" specifications shown in Table 1.	
	Chemistry	Must meet the "Minimum" specifications shown in Table 1.	
	Geoenvironmental Science/Earth and Planetary Materials Science	Must meet the "Minimum" specifications shown in Table 1.	
	Biology	We recommend a <u>CPU Core i7 or higher, 8GB or more of memory, and a 256 GB or larger SSD</u> to ensure you will not have to upgrade.	
Medicine	Medical Sciences	A PC meeting the "Minimum" specifications shown in Table 1 should be sufficient, but if you are buying a new PC we recommend getting one with <u>8 GB of memory</u> to ensure smooth operation.	
	Health Sciences	Nursing	Must meet the "Minimum" specifications shown in Table 1.
		Radiological Sciences	Should meet the "Minimum" specifications shown in Table 1, but have <u>8 GB of memory.</u>
		Medical Laboratory Science	Must meet the "Minimum" specifications shown in Table 1.
Dentistry		Must meet the "Minimum" specifications shown in Table 1. Please select a durable model from a company with good customer support.	
Pharmaceutical Sciences		Must meet the "Minimum" specifications shown in Table 1.	
Engineering	Mechanical and Aerospace Engineering	If you plan to take CAD classes in later school years, we recommend you select a computer that runs Windows OS and has 8 GB or more (preferably 16 GB) of memory.	
	Electrical, Information and Physics Engineering	<u>Must meet the "Recommended" specifications shown in Table 1.</u> If you use your computer without replacing it in and after your second year, we recommend getting one with <u>16 GB or more of memory and a 500 GB or larger SSD.</u>	
	Applied Chemistry, Chemical Engineering and Biomolecular Engineering	Please select a computer with a <u>Core i5 or better CPU, 8 GB or more of memory, and a 240 GB or larger SSD.</u>	
	Materials Science and Engineering	Must meet the "Minimum" specifications shown in Table 1.	
	Civil Engineering and Architecture	The "Minimum" specifications shown in Table 1 should be sufficient. You may need a better PC to conduct research from your 4th year onward. However, most of the laboratories already have PCs capable of performing the necessary research activities. Also, in classes where data processing or numerical analysis are performed, PCs are sometimes provided for class use.	
Agriculture		Must meet the "Minimum" specifications shown in Table 1.	