



June 6, 2022 UT Group Co., Ltd.

# UT Group has produced more than 1,000 semiconductor manufacturing equipment engineers

## Enhancing educational curriculum to increase practicality with the aim of producing 5,000 work-ready engineers by 2025

The number of engineers<sup>1</sup> who graduated from UT Group's Technology Skill Development Centers specialized training facilities for developing semiconductor manufacturing equipment engineers<sup>2</sup> exceeded 1,000 as of April 30, 2022. These engineers belong to UT Aim Co., Ltd. (President & Representative Director: Nobuyuki Tsukui), a wholly-owned subsidiary of UT Group Co., Ltd. (headquartered in Shinagawa-ku, Tokyo; President, Representative Director & CEO: Yoichi Wakayama), which is mainly engaged in the Manufacturing Business of the UT Group.



#### Training in the clean room

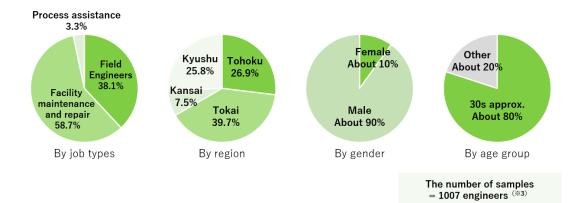
In Japan, while industry, government, and academia are working together to develop human resources for the reconstruction of the semiconductor industry and long-term growth, the shortage of engineers with knowledge and skills to manage manufacturing facilities and equipment and make production plans has become more normal than before, presenting a major challenge in strengthening production systems.

Prior to the present situation, UT Aim opened the Technology Skill Development Centers in four locations, starting with Kitakami City (Iwate Prefecture) in December 2020, followed by Yokkaichi City (Mie Pref.) and Kumamoto City (Kumamoto Pref.) in March 2021, and Osaka City (Osaka Pref.) in June. These facilities develop "facility maintenance and repair engineers," "field engineers," and "process assistance engineers"





and assign them to client companies. These job types are identified by the Ministry of Economy, Trade and Industry as job types in need of human resources.



#### Profiles of the course graduates

Employees (with indefinite-term employment) who receive training at the Technology Skill Development Centers have made career changes from technical employees, the number of which exceeds 30,000<sup>4</sup> at the UT Group. Those who receive training include many experienced operators at manufacturing sites in a variety of industries, including automobiles and electronic components, in addition to new graduates and mid-career hires. They undertake a technical skill training program that targets those with no engineering experience and meets the needs of client companies. They develop a career path as engineers in the semiconductor industry, where long-term growth is expected.

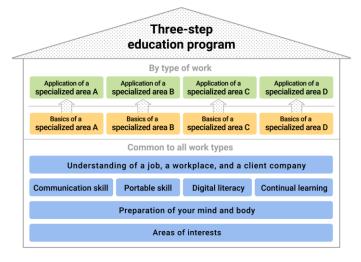
#### **Educational curriculum**

The curriculum is being developed based on pre-interviews with client companies and responses to questionnaires by employees who are currently assigned to client companies. It is being enhanced to reflect the constantly-changing needs of client companies and feedback from graduates.

The first step of the educational curriculum is to acquire basic work skills and manners, such as basic communication skills, problem solving capabilities, the ability to run the PDCA, and self-management, partly based on requests from client companies for dispatched employees to be "interested in semiconductors and be highly motivated regarding their jobs." Then, the second step is to acquire basic professional skills for each specialized area.







The training curriculum is designed for employees to learn in 15 days knowledge and skills for three job types undertaken by semiconductor manufacturing equipment engineers: 1) Assembly, installation, and coordination of equipment operation; 2) Maintenance and inspection of equipment; and 3) Monitoring of production processes and evaluation, analysis, and improvement of equipment. Instructors have a wealth of experience in the semiconductor industry as well as high-level teaching skills.

#### Future plans

With the aim of producing 5,000 semiconductor manufacturing equipment engineers by the end of March 2025, UT Group will continue to develop human resources who will be work -ready in the semiconductor industry. Moreover, the educational curriculum will be enhanced as follows so as to improve the efficiency of training and the effectiveness of learning knowledge and skills:

#### (1) Introduction of VR training course

The VR training course will be introduced at all four Technology Skill Development Centers by July 2022. In order to experience real-life work done on the job site, the VR training course includes contents, which enable learners to learn through the five physical senses, such as the learning of features and the use of screws and tools, work in the cleanroom, and the risks of heights, electric shock, and other hazards. Through the experiential learning in VR, we aim to develop work-ready engineers.

In addition, VR-based introductory training is also provided for employees before joining the training at the Technology Skill Development Centers, so as to enable them to gain knowledge in advance and effectively acquire skills during the 15-day training program.

#### (Reference) VR training content

 Learning about screws: Learn about the materials and features of screws and bolts in a game-like way.



- Basics of tools: Learn the basics of how to use tools with good and bad examples.
- Working at heights: Learn about the fall arrester (full harness) and the danger of falling off a ladder.
- Grating: Learn about the hazards and correct responses when working to open the floor of a cleanroom.
- Electric shock

Upward

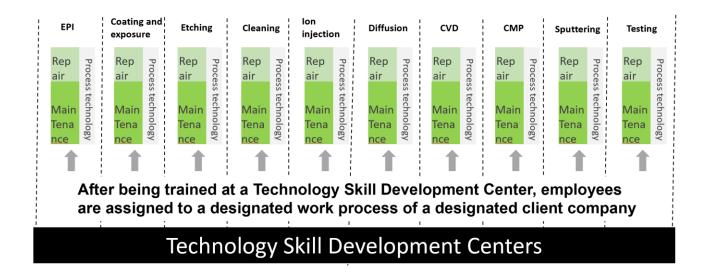
UT Group

- In the case of at home Learn about the danger of electric shock in everyday life.
- $\boldsymbol{\cdot}$  In the case of a cleanroom Learn the precautions for electric shock and how to
  - respond correctly during maintenance work.
- Noise: Learn how to sharpen one's senses and to detect abnormal noises that occur in the cleanroom and how to correct them.

#### (2) Advanced specialized education tailored to the assigned client company's work process

From the current fiscal year ending March 2023, we plan to start specialized applied training (third step), which is tailored to the job at the actual assigned workplace. Semiconductor manufacturing comprises 10 diverse processes<sup>5</sup>, and UT's employees who receive training at the Technology Skill Development Centers will find out their assigned work process and client company during the training. They will handle the components and materials which are actually being used in their to-be-assigned workplace, in order to improve their expertise and technical capabilities by the time of assignment.

### Examples of assigned work processes for facility maintenance engineers, field engineers and process assistance engineers







- 1. Number of employees dispatched or outsourced to client companies
- 2. Engineer with the knowledge and skills to plan for the management and productivity improvement of facilities and equipment in the semiconductor manufacturing process
- 3. Semiconductor manufacturing equipment engineers as of April 30, 2022
- 4. 31,636 technical employees as of March 31, 2022
- 5. In the case of facility maintenance engineers and process assistance engineers

End

Company Overview	
Company name:	UT Group Co., Ltd. (listed on the Prime Market of the Tokyo Stock Exchange)
Website:	https://www.ut-g.co.jp/
Address:	Denpa Bldg. 6F, 1-11-15 Higashi-Gotanda, Shinagawa-ku, Tokyo
Representative:	Yoichi Wakayama, President, Representative Director & CEO
Founded:	April 2, 2007
Capital:	680 million yen
Business activities:	Dispatch of indefinite-term employees in areas of manufacturing, design,
	development, construction, etc.
Number of employees: 38,527 (consolidated, as of March 31, 2021)	

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