Background to the establishment of the program, and program objectives

With the rapid pace of change in both the industrial structure and business models, it is increasingly common for engineers to find that the skills they have acquired while working in a particular enterprise are no longer adequate to meet new needs. There is a pressing need for human talent that is able to acquire a comprehensive overview of social conditions and of the latest trends in technology, and which is capable of integrating different technologies to create new businesses. While faced with this need, the reality of the situation in Japan at present is that opportunities for study and training to be able to independently identify problems and tasks, and to find solutions, are lacking. The need to provide educational support for corporate engineers that will enable them to build new knowledge and skills, such as acquisition of knowledge in new fields and awareness of nascent technologies, as well as cultivation of perspicacity in relation to technologies in different fields, is an urgent issue.

The Institute of Industrial Science, the University of Tokyo (IIS) is a unique research institute that covers all fields of engineering science while working to break down the barriers that divide disciplines, and which promotes multidisciplinary collaborative research. Making effective use of these characteristics, IIS is running the New Expertise Training (NExT) Program, with the aim of meeting the above-mentioned social needs.

The NExT program opens its doors to all corporate engineers who are motivated to build new capabilities; by providing support to help them strengthen their capabilities, the program will cultivate talented individuals who will lead the creation of new industrial fields in Japan. The program will be a useful opportunity for human resources development in business enterprises, if utilized as a part of training programs for new employees and existing employees.

The types of human talent we hope to foster

- **New employees**
  - Personnel who can utilize cutting-edge technology effectively, and who are capable of taking on active roles in new fields and in interdisciplinary collaborations.
  - Personnel who can undertake self-directed learning with respect to nascent technologies, and can carry out tasks in an enterprise while maintaining a wide-ranging perspective.

- **Mid-level employees**
  - Personnel who can acquire competence in a wide range of cutting-edge technologies that will contribute to the solving of both social and industrial issues, and who are capable of playing a leading role in research projects.
  - Personnel who can develop a second area of specialization, and who can propose and lead innovation in the integration of different fields.
  - Personnel who can master the fundamentals of cutting-edge projects and supervise research.

Expected benefits

By studying fields that are different from their existing areas of specialization, participants will acquire the latest knowledge in new engineering fields, as well as learning R&D approaches that will lead to the creation of new fields, and techniques for effectively combining multiple disciplines. More specifically, the following benefits can be expected:

- **New employees**
  - Participants will acquire knowledge relating to nascent technologies that would not be available in their own enterprises.
  - Through coming into contact with nascent technologies in new and different fields, participants will be able to develop more extensive personal connections that will help them in the future, as well as a broader perspective, both of which are essential for becoming a successful engineer.
  - By adding the knowledge acquired through this training to the knowledge that they already possessed prior to joining their current enterprise, participants will acquire the methodology needed to handle tasks in their corporation autonomously and with broader vision.

- **Mid-level employees**
  - Participants will acquire both basic and cutting-edge knowledge essential for supervising, from a technical perspective, the new fields that enterprises are seeking to develop.
  - Through coming into contact with various nascent technologies that can contribute to the creation of new fields, engineers will develop a wider perspective and personal connections that will be useful for research, which could lead to the cultivation of new fields.
  - Participants will acquire the methodology needed to cultivate new fields in creative ways through examining and planning research projects in fields outside their own area of specialization.
  - By studying different engineering fields and integrating them, participants will strengthen their capabilities as project leaders capable of driving innovation.
1. Training period
In principle, between 6 months and 1 year after acceptance (the training period can be extended if necessary)

2. Tuition
- Long-term training (over 6 months, up to 1 year): ¥ 2 million (tax included)
- Short-term training (6 months): ¥ 1 million (tax included)

Please contact us for details of tuition payment methods, staged payments, or tuition for training that is implemented over two academic years.
If participants wish to perform experiments, the cost of the experiments will be charged separately.

3. Location
Laboratories at the Institute of Industrial Science, the University of Tokyo

4. Participants
Applications will be considered from engineers and researchers of all ages who are capable of self-directed study.

5. Application Documents
- Application form for the NExT Program at IIS, the University of Tokyo (Form 1)
- Curriculum vitae (Form 1)
- Description of motivation for joining the program and expectations for it, along with details of research and tasks performed to date (Form 2)
- Nondisclosure agreement (Form 3)
- Letters of recommendation (Form 4)
- Business contact details notification (Form 5)

Each application form can be downloaded from the NExT Program’s website (http://www.iis.u-tokyo.ac.jp/next_n/).

6. Selection Process
Screening by the individual laboratories at which applicants requested to undergo training, as well as by the academic affairs committee.

7. Application Deadline
Two months prior to the desired starting date for training (if this date falls on a weekend or public holiday, then the deadline shall be the day prior to this date).

Applications will remain confidential, and the application documents will used only for the purpose of NExT Program application screening. Please note that application documents will not be returned.

8. Screening Results
Notification will be sent within fourteen days of the submission of application forms. Those who proceed to the next stage of interview-based selection by the faculty of the laboratories at which applicants requested to undergo training will be notified of the selection results.

9. Address for Submission of Applications, and Contact Details
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Phone: 03-5452-6026
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