

**Certified Evaluation and Accreditation Results for  
Professional Graduate Business School**

Department of Industrial Technology and Innovation, Graduate  
School of Engineering, Tokyo University of Agriculture and  
Technology



Basic Information of the Institution	
Ownership: National	Location: Tokyo, Japan
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**Certified Evaluation and Accreditation Results  
for the Department of Industrial Technology and Innovation, the Graduate School  
of Engineering, Tokyo University of Agriculture and Technology**

The Department of Industrial Technology and Innovation in the Graduate School of Engineering (hereafter, the Department) sets its mission as training personnel with the deep academic knowledge and high-level skills required of highly specialized professionals who can promote innovation in industrial technology. It sets its particular purpose as training competitive “engineers/researchers who understand management” or “entrepreneurs who understand technology” by offering training in both technology management and research and development through advanced engineering studies and the formulation of practical business plans. The Program’s purpose is clearly indicated at the beginning of its promotional brochure and application materials, and in the admission policy as well as on the web page. Through opportunities such as the open campus and meetings to explain the entrance examination, the Department makes information about itself directly available to prospective students.

In order to achieve the particular purpose mentioned above, the Department makes specific efforts in training technology personnel who promote technological innovation by polishing skills in technology management and in research and development. Specifically, it trains “engineers/researchers who understand management” and “entrepreneurs who understand technology” through advanced engineering research and the formulation of practical business plans.

However, some problems are evident. When discussing the purpose, to train “engineers/researchers who understand management,” the content and the level of “understanding” are not clearly defined. Therefore, how the curriculum affects students, how the intended competencies are developed, and what the relationship is between the curriculum and the intended image of personnel, i.e., “engineers/researchers who understand management,” are unclear. In other words, the basic concepts and ideas regarding “management education” have not been sufficiently examined.

For example, in the innovation subject group, three classes are offered for each of four industrial courses; Issues in Technology, Issues in Technological Development, and Issues in Industry. In this subject group, it is aimed that the relationship between this subject group and the management subject group becomes clearer through acquiring specialized knowledge in industrial technology; and students learn systematically about Technological Strategy as the core knowledge of technology management in relation to Research and Development Administration, Innovation Administration, and Intellectual Property Administration in four industrial technology courses. Specifically, four industrial technology courses are Biotechnology, Environmental Materials, Advanced Machinery, and Information Processing. These courses, however, do not correspond to areas in industries, but are in fact sub-areas of engineering. In the four industrial technology courses, then, students only learn technologies already used or slated to be used in various industries, but not the structure of the technology constituting the industry or the relationship between the technologies and the market. Further, while basic classes such as Accounting and Marketing are taught in the management subject group, classes on current research on technology management are not offered, and we did not observe any effort to teach the relationship between management and technology in the curriculum. Also, regarding the educational instructions and the learning outcomes of the students, scholarship in the management field is not sufficiently reflected, and very few specialized books in the management field are found in the study room for students or in the university library.

In terms of faculty specialization, while almost all of the published papers by the full-time faculty belong to the field of engineering, only a few faculty present papers at academic meetings related to management. Further, none of the faculty teaching

management have published papers in academic journals in the field of management or presented their research to the international academy in the field of management. While the research in technology management has progressed rapidly in recent years, the Department pays little attention to these new findings in the curriculum.

In the meantime, the number of adult working students has been decreasing since becoming a part of the Division of Engineering. From 2012 to 2014, the ratios of enrolled adult working student to the incoming student admission cap have been hovering around 10%. In addition, among those who applied directly from undergraduate programs, most are from the Tokyo University of Agriculture and Technology (hereafter, TUAT). TUAT easily satisfies the basic required conditions for a university because it has well-equipped facilities and provides good care for student life. Indeed, it is in a good location, with a nearby railway station and a beautiful campus. However, it cannot be highly evaluated as a professional graduate school in this field because currently, a great majority of admitted students are from the Faculty of Engineering in TUAT. All of these students have chosen the Technology Development Practical Program and take one of four industrial technology courses.

We offer the following suggestions to address these concerns. First, based on the diploma policy of the Department, the structure of curriculum needs to be reconsidered in order to carry out the basic mission of a professional graduate school in this field. Second, to bridge the Department's education between theory and practice, the organization of full-time faculty needs to be formulated in order to achieve the basic mission of a professional graduate school. These two points must be improved immediately. To further improve these issues, it is necessary to establish an educational content and methods based on the basic ideas to achieve the particular purpose of the Department, and to do this, it is necessary to create a mid-range and long-range vision and policy for the Department. Additionally, since internal review within the Department may not lead to immediate improvement, a specific improvement plan should be formulated by inviting the opinions of external experts in order to carry out the basic mission of a professional graduate school in the field of management.