

Management of Technology [MOT] Professional Graduate School Accreditation Standards (draft)



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Management of Technology (MOT) Association Japan

Preface

The Professional Graduate School Establishment Standards were established in March 2003 by the Ministry of Education, Culture, Sports, Science and Technology, and the Management of Technology Professional Graduate Schools have been established in accordance with these standards. Article 69-3 of the School Education Act stipulates that “Universities that have professional graduate schools shall undergo accreditation assessment for the status of the curriculum, faculty organization, and other education and research-related activities of the said professional graduate schools at intervals prescribed by a separate ordinance in light of the objectives of the establishment of the said professional graduate school.” Article 40 of the Enforcement Ordinance of the School Education Act stipulates that the accreditation assessment interval shall be “within five years.”

The National Institution for Academic Degrees and University Education, an independent administrative institution and accreditation assessment agency, formulated and published the “Professional Graduate School Assessment Standards Model” in January 2007. The Ministry of Economy, Trade and Industry formulated and released the “MOT Program Accreditation Standards” in March 2006.

The Management of Technology Professional Graduate Schools that must undergo accreditation assessment established the “Management of Technology Association Japan, hereafter, MOT Association Japan” in 2003. This Association previously formulated the “Vision and Assessment Items for Management of Technology Professional Graduate Schools.” This time, it has formulated the “Management of Technology Professional Graduate Schools Accreditation Assessment Standards,” reflecting the progress of related legislation and accreditation assessment in Japan.

These standards are understood to be the minimum required for the Management of Technology Professional Graduate Schools in Japan to establish “Professional Graduate School Establishment Standards” and to aim at further advancing the level of the graduate schools. The objective of the establishment of the standards is designed not only to comply with the national standards, including the School Education Act, Graduate School Establishment Standards and the Standards for Establishment of Graduate Schools, but also to conform to the Assessment Standards Model of Professional Graduate Schools and, furthermore, to advance the educational level of professional graduate schools by implementing the plan-do-check act (PDCA) cycle.

At this moment, the accreditation assessment body for the Management of Technology Professional Graduate Schools is still undecided, but we hope that our “Management of Technology Professional Graduate Schools Accreditation Assessment Standards” will be adopted and implemented by the accreditation assessment body.

Standard 1	Objectives and enrollment selection
<ul style="list-style-type: none"> • The objectives of each professional graduate school shall be clearly stated, shall comply with the School Education Act, and shall be disseminated and publicized. • Acceptance of suitable students shall be ensured in accordance with the admission policy. • Actual enrollees shall be overseen to an extent that does not interfere with the achievement of their educational goals. 	
Basic viewpoints	1. Objectives of the establishment of Management of Technology Professional Graduate Schools
	<p>The objectives of the establishment of Management of Technology Professional Graduate Schools shall comply, in principle, with Section 2, Article 65 of the School Education Act and Article 1-2 of the Standards for Establishment of Graduate Schools, and conform to Item 2-1 (Objectives of professional degree course), the Outline of the Standards for Establishment of Professional Graduate Schools: “The professional degree course shall aim at cultivating profound knowledge and outstanding ability necessary for assuming an occupation requiring a high degree of expertise.” For example, the Management of Technology Professional Graduate Schools shall have a shared objective of establishment--education that enables students to cultivate practical knowledge by means of detecting, analyzing and solving technology management problems faced by a technological society--with the details to be left to each graduate school’s policy on the basis of its characteristics.</p>
	2. Disclosure
	<p>The above-mentioned objectives of establishment shall be disseminated to faculty members and students and publicized to society through media such as printed material and the Internet, for the applicants’ convenience. Efforts shall also be made to have the objectives of establishment recognized by the general public.</p>
	3. Admission policy
	<p>An admission policy corresponding to the objectives of establishment, that is, each graduate school’s basic policy regarding the ability, motivation, aptitude, and experience required of applicants, shall be established, and publicized and disseminated. In this case, because Management of Technology Professional Graduate Schools enroll mainly people with business experience and also admit new college graduates and applicants for admission on the basis of a double-major system, the admission policy shall take this point into account.</p>
	4. Entrance examination
	<p>The Management of Technology Professional Graduate Schools shall establish the details and method of entrance examinations and an appropriate implementation system, and shall hold fair entrance examinations in accordance with the admission policy. In this case, effort shall be made to give consideration to applications for admission from business people, differing from general graduate school entrance examinations.</p>
5. Enrollment limit	
<p>Each Management of Technology Professional Graduate School shall specify its enrollment and admission limits when establishment is permitted and make efforts to rationalize the number of actual enrollees and the number of actual admitted students to prevent them from encountering any trouble in achieving their educational goals.</p>	

Standard 2	Curriculum
	<ul style="list-style-type: none"> • The curriculum shall be organized systematically in light of the objectives of each professional graduate school by paying attention to the link between theoretical education and practical education, and shall be appropriate in terms of the relationships among the content, level and degree to be awarded. • A class instructional method and curriculum guidance methodology appropriate for curriculum development shall be established. • Assessment of academic achievement, credit accreditation and completion accreditation shall be appropriate and effective. • Course guidance shall be provided appropriately to students during the course of study.
<p>Basic viewpoints</p>	<p>1. Educational goals</p> <p>The basic aim of each graduate school shall be to have students master the theoretical and practical knowledge necessary for the management of technology and to cultivate professional human resources having a high sense of morality and internationalized views in accordance with the objectives of establishment laid down by the graduate school. The graduate school should establish concrete educational goals.</p> <p>2. Basic viewpoint</p> <p>To provide students the ability to develop business on the basis of technology, the educational curriculum shall be organized in accordance with each professional graduate school's objectives of establishment, for example, by making the subjects in the technological field the fundamental subjects and by appropriately combining them with fundamental subjects in the management field, i.e., organizations such as enterprises, management strategy, technological and manufacturing management, marketing, business and finance, and corporate ethics.</p> <p>3. Organization of curriculum</p> <p>The curriculum shall be systematically organized with theoretical education and practical education creatively combined to adequately achieve the objectives of the establishment of the Management of Technology Professional Graduate College. In this case, the concept and characteristics of selecting subjects for the provision of practical ability by each professional graduate school shall be clarified, and the actual routes to career improvement for the achievement of educational goals shall be clearly specified by categorizing the overall structure of the curriculum into basic field subjects, application and development subjects, and project subjects such as case studies. Allocation of the recommended number of required units shall be left to each graduate school's discretion. However, it is advisable, in view of the principle of the establishment of Management of Technology Professional Graduate Schools, to guide students by allocating approximately one-fourth of the required number of credits, i.e., completion prerequisite, to the fundamental subject group, approximately one-half to the application and development subject group, and approximately one-fourth to the practical project subject group.</p> <p>4. Educational content</p> <p>Efforts shall be made to have the educational content of each subject properly reflect the latest research and technology and business trends, so as to respond adequately to requests from relevant occupational fields and maintain a sufficiently high level of each graduate school's educational content to meet the expectations of the said occupational fields.</p>

5. Consideration related to credit
Fundamentally, credit shall be given to students while endeavoring to ensure that students can fully understand the subject content and practically develop and utilize the obtained knowledge. To this end, the school should seek to ensure that the credits acquired by the students correspond to their cultivated ability, including efforts to establish an upper limit on the number of registered courses, in the course period set by each graduate school. It is also required to establish optimal time schedules in consideration of the students taking courses.
6. Course term
The standard course term shall be two years; however, at each graduate school's discretion, one-year courses may be set up for students such as those with business experience. In this case, appropriate school terms, school hours and curricula shall be arranged and implemented such that the students can acquire adequate results in line with the graduate school's objectives of establishment.
7. Responses to diversity
Consideration shall be given to the organization of a curriculum that responds to the students' various needs, the trend of academic development, and social requirements (for example, approval for credit for other graduate school subjects, credit exchange with other universities, and approval for credit for completing internships).
8. Educational methods
To cultivate students' overall ability to detect, analyze and solve problems, efforts shall be made to organize each lecture course by combining lectures, case studies, group discussions, presentations, and case methods, for example, and to organize the entire curriculum by appropriately combining project subjects, including field studies, internships, case studies and project plans.
9. Class structure
The number of students registered in each lecture course shall be such that it will be possible to achieve an adequate educational effect in consideration of various educational conditions such as lecture method, facilities and equipment.
10. Syllabus
An appropriate syllabus that specifies course plan, course content and teaching method shall be prepared and utilized in accordance with the objectives of the curriculum.
11. Correspondence courses
If correspondence courses are provided, the method of teaching courses using screening or media shall be established, and proper guidance shall be given to students.
12. Course guidance
Course guidance and study consultation shall be provided appropriately in accordance with the students' diversity such as having or not having academic background or business experience.
13. Assessment of academic achievement
Clear academic achievement assessment criteria shall be disseminated to students, and assessment of their academic achievement and certification of the credit shall be carried out in accordance with the standard.

14. Completion requirements
The completion accreditation standards that meet each graduate school's objectives of establishment shall be established and disseminated to students.
15. Degree
The degree of Master of Technology Management (professional) shall be awarded. Its specific details shall be left to each graduate school's discretion.
16. Sharing of educational information
Information on students' learning status and each faculty member's course content and teaching method shall be shared among the faculty members, and necessary measures to improve the educational level shall be taken.
17. Students entering from the work force
Management of Technology Professional Graduate Schools shall provide curricula developed by taking into account the fact that many students enter from the work force.

Standard 3	Educational achievements
<ul style="list-style-type: none"> Educational results in line with the academic achievements, qualifications and skills to be acquired by students, and the talents to be developed, which are aimed at attaining the educational objectives of each professional graduate school, shall be pursued. 	
Basic viewpoints	1. Quantitative assessment
	Educational results appropriate for the awarding of academic degrees shall be ensured on the basis of each student's status of earning credits and completing courses and status of obtaining relevant qualifications. It must be possible to determine whether educational results and effects in line with each professional graduate school's objectives have been adequately achieved, on the basis of the quantitative status of the student as a whole, such as school attendance and course completion.
	2. Student evaluation
	It must be possible to determine, on the basis of the results of student evaluations of courses and interviews with students, whether educational results and effects in line with each professional graduate school's objectives have been achieved.
	3. Career status
	It must be possible to determine whether the social activities of graduates from Management of Technology Professional Graduate Schools are adequately reflected in their achievements and results, such as social success, that are based on the added value of the education obtained at the Management of Technology Professional Graduate Schools. In this case, it must be possible to determine that educational results in line with each professional graduate school's objectives have been achieved, on the basis of the graduates' outcomes, such as their career after completion of the courses, and school interviews with the graduates and relevant people at their place of employment.

Standard 4	Organization of faculty members
<ul style="list-style-type: none"> • Faculty members required to implement the curriculum shall be appropriately assigned. • Standards for employment and promotion of faculty members shall be properly established and implemented. • Research activities that serve as a basis for the achievement of educational goals shall be carried out. • Teaching assistants needed to implement the curriculum shall be appropriately assigned. 	
Basic viewpoints	1. Organization
	Each graduate school should have a basic policy based on the organization of faculty members stipulated by the Standards of Establishment of Professional Graduate Schools. The organization of faculty members shall be implemented on the basis of this basic policy.
	2. Number of faculty members
	A sufficient number of faculty members to implement the curriculum of each professional graduate school must be ensured, the minimum number being stipulated in the Standards of Establishment of Professional Graduate Schools. Full-time faculty members recognized as having high-level ability for educational leadership related to their specialized field must be recruited. Such full-time faculty members shall satisfy one of the following criteria.
	They have made educational or research achievements in their specialized field.
	They have high technical expertise in line with their specialized field.
	They have particular knowledge in a field related to their specialized field.
	3. Achievements of faculty members
	Materials that indicate each faculty member’s ability of educational leadership in his/her specialized field, such as the faculty member’s educational background, and research and practical achievements, shall be made public through the publication of the results of self-inspection and self-assessment or otherwise, in addition to being publicized as part of the accreditation assessment based on this standard.
	4. Practitioner full-time faculty members
Among full-time faculty members at each professional graduate school, the number of those who have more than approximately five years of business experience in their field of specialty and who have outstanding business ability (hereinafter referred to as practitioner full-time faculty members) shall be 30% or more of the “number stipulated separately by the Minister of Education, Culture, Sports, Science and Technology” in the Standards for Establishment of Professional Graduate Schools.	
5. Faculty members in charge of courses	
In principle, it is advisable to assign full-time professors or associate professors to the courses regarded as educationally important at each professional graduate school.	

6. Recruitment guidelines
It is advisable to take appropriate measures to promote the vitalization of faculty members' activities according to each professional graduate school's objectives, for instance, the introduction of fixed terms, an open application system and a tenure system; the consideration of the balance between age and gender; and the recruitment of faculty members from foreign countries. It is also advisable to put in place a system for improving faculty members' ability (for example, a sabbatical system).
7. Recruitment requirements
Clear and appropriate recruitment and promotion standards for faculty members shall be established and applied. In this case, it is advisable that sufficient assessment, particularly of faculty members' ability in educational leadership, be carried out.
8. Activity assessment
Assessment methods of faculty members' educational activities and research and social activities with regard to educational content, for example, student evaluation of courses, faculty development, and submission of a report on activity status based on self-inspection and self-evaluation, shall be established and regularly implemented. A system for feeding back the assessment results and findings to each faculty member and carrying out action such as improvement, consultation and recommendation shall be established and implemented. See "Standard 6 Advancement and improvement of faculty member's quality" for details.
9. Organization of administrative office
An administrative office needed to implement the curriculum of each graduate school shall be established and the necessary personnel shall be appropriately assigned. The organization of the administrative office shall enable the management and administrative organizations to make effective decisions in order to achieve the objectives of the professional graduate school.

Standard 5	Educational environment including facilities and equipment
<ul style="list-style-type: none"> · The facilities and equipment, and literature and materials, such as books and journals, needed for education and research, which respectively correspond to the education and research organization and the curriculum of the professional graduate school, shall be implemented appropriately and utilized effectively. · Study support, such as student consultations and an advice system, and financial support shall be adequately extended to students. · The professional graduate school shall have a financial base that enables it to perform educational activities appropriately. · The management and administrative organizations needed to achieve the objectives of the professional graduate school shall be effectively implemented. 	

Basic viewpoints	1. Facilities and equipment
	Facilities and equipment, such as lecture rooms, practice rooms, training rooms, and faculty rooms, which respectively correspond to the education and research organization and to the curriculum of the professional graduate school, shall be implemented appropriately and utilized effectively.
	2. Students' self-directed study environment
	Facilities such as study rooms, group discussion rooms, and information terminal rooms shall be appropriately provided and utilized effectively for the achievement of each graduate school's educational goals and in accordance with its curriculum.
	3. Reference material
	Books, journals, audiovisual materials, and documents/materials necessary for education and research shall be provided systematically and utilized effectively for the achievement of each graduate school's educational goals and in accordance with its curriculum.
4. Student services	
A student services system, including financial support for students and consultation and advice regarding school attendance and student life, shall be implemented systematically and utilized effectively so that the students can concentrate on their school course during their school days. A system for the collection, management and provision of necessary information and the provision of guidance, teaching and advice shall be implemented systematically and utilized effectively so that the students can voluntarily choose their careers according to their ability, aptitude and preference. For students considered to require special services (foreign students, handicapped students), a student services system for providing them appropriate study support and livelihood support shall be implemented and utilized effectively.	

Standard 6	Advancement and improvement of faculty member quality
	<ul style="list-style-type: none"> · A system for inspecting and assessing the educational status and promoting improvement and advancement on the basis of the results shall be implemented actively and effectively. · Adequate efforts to improve faculty member quality, such as faculty member training, shall be made appropriately.
Basic viewpoints	1. Self-inspection and self-evaluation
	Regarding the status of admitting and teaching students at the professional graduate school and its results and effects, a self-inspection and self-evaluation system based on supporting material and data shall be established and implemented effectively and systematically.
	2. Interview with students
	Student evaluation of courses, satisfaction, and study environment shall be carried out appropriately in accordance with Standard 3-2 and the results shall be reflected in proper form in the self-inspection and self-evaluation of the teaching status.

3. Interview with related parties outside the graduate school
Views of persons other than the faculty members of each graduate school, such as graduates and related parties at their place of employment and social needs relating to the professional field shall be reflected in proper form in the self-inspection and self-evaluation system of the teaching status.
4. Disclosure
The results of self-inspection and self-evaluation shall be widely publicized within the professional graduate school and the community.
5. Utilization of self-inspection and self-evaluation results
The results of self-inspection and self-evaluation shall be fed back, efforts to advance and improve educational quality shall be made systematically, and specific and continuous actions, such as a review of the curriculum, shall be taken.
6. Continuous improvement of lecture content
Each faculty member shall make efforts to improve his/her overall teaching quality and to continuously improve course content, educational materials and teaching skills.
7. Faculty development
A graduate school organization in which the needs of students and faculty members are reflected shall be established and a faculty development system shall be implemented in an appropriate manner. Faculty development shall be designed to improve the practice-based faculty members' ability of educational leadership and to enrich the research-based faculty members' practical knowledge, which shall lead to improvements in educational quality and content.