

Recent Activities for Engineering Accreditation in JAPAN

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1. Introduction

Now, we have two agricultural engineering programs in 2002 and four programs in 2003, which have been accredited by JABEE (Japan Accreditation Board for Engineering Education). Total 102 engineering programs have been accredited. In 2004, four to seven agricultural engineering programs (exact number is confidential) are applied for seeking accreditation. JABEE was approved as a provisional signatory member of WA (Washington Accord) in June, 2001, and JABEE will be approved as a full WA signatory member in 2005. This paper describes these recent activities for engineering accreditation in Japan.

2. Engineering Accreditation Activities

2.1 General Description for Universities and Students

We have about 370 faculty members and about 4,000 undergraduate students in 42 universities related to agricultural engineering programs. This number of students is about one half compared with the one related to civil engineering programs. The number of JSIDRE (Japanese Society of Irrigation, Drainage and Reclamation Engineering) members is 470 for faculty including about 100 members of other academic major fields; 260 for undergraduate; 340 for graduate.

The number of JABEE examiners is 13 for team chair and 55 for team member and observer; 29 for universities; 20 for private companies; 6 for others. The number of candidates for JABEE examiners is total 147; 104 for universities; 30 for private companies; 13 for others.

2.2 Educational Accreditation System for Japanese Engineers¹⁾

JABEE provides program accreditation for the following four purposes.

- (1) Reassuring the quality of engineering education. That is, providing the public with the information regarding which program of all those available for engineering education, are accredited by JABEE, thus ensuring that the graduates of the accredited programs meet the learning and educational objectives established within each program.
- (2) Promoting the introduction of excellent educational methods and developing engineering education on an ongoing basis.
- (3) Developing methods of evaluating engineering education, while fostering specialists in the evaluation of engineering education.
- (4) Clarifying organizational responsibility in educational activities as well as role of individual instructors, while promoting proper evaluation of each instructor's educational contribution.

Agenda I

The programs within the scope of JABEE accreditation are those provided by four-year undergraduate education in the universities approved by the authorities including the Ministry of Education, Culture, Sports, Science and Technology (including programs that provide two additional years of specialized training on top of the general polytechnic and junior college education). As far as the contents of the program focuses on basic engineering education, it does not matter which faculty within the university officially provides the program.

JABEE examines the programs applied by the applicant institutions, and accredits the programs that satisfy all of the accreditation criteria. For this process, JABEE commissions either single or joint academic societies and associations that are regular JABEE members to send out an examination team in June. This examination team is constituted of a team chair, three to four team members and three to four observers. The examination team studies the contents of the self-inspection report submitted by the applicant institution until the end of July, verifies the factual basis of the documents by conducting three days on-site examination in October to December, to determine whether or not the candidate program satisfies all of the accreditation criteria. The results of this initial screening by the examination teams are discussed and coordinated, and established by the discipline-based examination committee in appointed societies and the JABEE coordinating committee of examination and accreditation in February and March. Based on the results as established by this process, the coordinating committee of examination and accreditation prepares a draft of the decision whether or not to grant accreditation, which is further discussed and finalized by the JABEE accreditation commission in April, to be officially approved by the JABEE board of directors in May. The JABEE board of directors will be legally responsible for the accreditation and examination. JABEE examination and accreditation has been conducting since 2001. Consequently, total 102 engineering educational programs are accredited as shown in Table 1.

Table 1. Accredited Engineering Programs in Japan

Relevant Field	2001	2002	2003	Total
Chemical Eng.	2	8	7	17
Mechanical Eng.	0	6	12	18
Materials	0	3	2	5
Resources & Geological Eng.	0	0	4	4
Information	0	1	4	5
Electrical & Electronics	0	3	7	10
Civil Eng.	0	8	11	19
Agricultural Eng.	0	2	4	6
General Eng.	1	1	7	9
Architecture & Building Eng.	0	0	4	4
Industrial Eng.	0	0	2	2
Environmental Eng.	0	0	1	1
Total	3	32	67	102

2.3 Joining Washington Accord

The 6th Biennial Meeting of The Washington Accord Signatories was held in Rotorua, New Zealand, June 9 to 10, 2003. JABEE submitted a progress report and an official request to be considered a full signatory of the Washington Accord. November 9 to 19, 2003, a review team from WA visited Japan and reviewed JABEE accreditation systems including observation of on-site examinations. This team was constituted in members from Canada, New Zealand and Hong Kong. JABEE was approved as a provisional signatory member of WA on June 22, 2001 in Cape Town, South Africa. JABEE is noted as the first model case of joining non native English countries. We strongly hope that JABEE will be approved as a full signatory member of in 2005. In the 6th Meeting of WA, Germany, Singapore and Malaysia were approved as a provisional signatory member of WA. Other many countries aim at joining WA and thus the globalization of engineering educational accreditation systems will be accelerated further more. In near future, it is expected that the Republic of Korea and Taiwan will apply for joining WA. Thus, we can share our experience to them.

References

- 1) JABEE (2003): Accreditation Procedures and Methods 2003, pp.1-3 (in Web Site).