# JABEE Fundamental Framework
# for Accreditation of Professional Education Programs

## Applicable in the year 2012 and later
(revised as at 10 July 2015)

Only the Japanese version of "JABEE Fundamental Framework for Accreditation of Professional Education Programs applicable in the year 2012 and later" is official and no major revision has been made up to now.
English translation is for informational purpose.

**JABEE**

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JABEE

Fundamental Framework for Accreditation of Professional Education Programs

Chapter 1 Purpose

1.1 This document defines a fundamental framework for the tasks to be implemented by JABEE as defined in its Charter 3 (1): formulating the accreditation criteria, evaluating and accrediting professional education programs, and publicizing accredited programs.

Chapter 2 Document Structure for Evaluation and Accreditation, and Definition of Fundamental Terminology

2.1 JABEE evaluates and accredits professional education programs and publicizes accredited programs by the rules and procedures mentioned in the documents listed in (1)-(4) below:

(1) Common Criteria

Common Criteria defines criteria common to all categories of accreditation and to all fields of JABEE accreditation. A program seeking for accreditation shall satisfy all items of Common Criteria,

(2) Category-dependent Criteria

Category-dependent Criteria provides category-dependent criteria supplemented with fields specific issues. Some are mandatory items by which programs are evaluated, and others are not items to be evaluated but to be considered as supplementary to Common Criteria,

(3) Criteria Guide

Criteria Guide provides interpretation of Common Criteria and Category-dependent Criteria, and specifies points of which the stakeholders shall take account,

(4) Rules & Procedures for Evaluation and Accreditation

Rules & Procedures for Evaluation and Accreditation provides necessary rules and procedures for evaluation and accreditation.

2.2 Fundamental terminology for evaluating and accrediting professional education programs, and publicizing accredited programs are defined in (1) to (6) below:

(1) "Professionals"[1] are individuals who commit to specialized professions in

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[1] "Professionals" covers "Engineers" as defined in International Accord such as Washington Accord, "Computing and IT-related professionals" and "Architects"

engineering, computing and architecture. The specialized profession does design manufacture, operate, and maintain artifacts or systems in hardware and software that contribute to the benefits and safety of the mankind, or engage in related research works, by applying knowledge of mathematical science, natural science and artificial science, and utilizing natural resources and power in economic way with foresight on their influence over society and environment. The specialized profession is an occupation, which is expected to provide specialized services based on the advanced knowledge and practical experience for specific duties required by the society, and which is autonomous by having its own ethical code, and is distinguished from a mere occupation,

(2) "Educational Program" does not simply mean a curriculum of a department, a course, or a major in a higher education institution. It is a collective term for a department or a course including all processes and environments of the education from admission to graduation with adequate assessment and judgment for graduation. It is designed for all admitted students to achieve the "learning outcomes" which are established based on the "profile of individuals to be fostered",

(3) "Professional Education Program" [2] is a program that fosters new professionals and does not include a program to educate existing professionals,

(4) The "learning outcomes" [3] are knowledge and abilities, which all the graduates shall surely acquire through the program.

(5) The "profile of individual to be fostered" is the role model of graduates to engage in the society as specialized professionals, established by the higher education institution based on its educational goal. The "profile of individual to be fostered" is "educational objectives" established by the higher education institution. It does not mean that the graduates shall fully achieve educational objectives at the time of completion of the program,

(6) "Curriculum" means the educational courses as a system provided by the educational program together with student guidance provided by the higher education institution.

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[2] "Professional Education Program" covers "Engineering Education Program" in International Accord such as Washington Accord, "Computing and IT-related Program" and "Architectural Education Programs"

[3] The "learning outcomes" reflect the Graduate Attributes of the Washington Accord which was approved by the International Engineering Alliance (IEA) in 2009.

Chapter 3 Standpoint of Accreditation

3.1 JABEE evaluates and accredits professional education programs and publicizes accredited programs with the purposes mentioned in (1) to (4) below:

(1) To ensure the quality of professional education. By publicizing JABEE accredited programs among professional education programs, JABEE notifies to the society that the graduates of each accredited program are those who have achieved the learning outcomes established by the program,

(2) To continuously develop the professional education program by encouraging application of better educational methods,

(3) To develop evaluation methods for professional education and to foster evaluation experts on professional education,

(4) To clarify the organizational responsibility and the role of each faculty to the educational activities, and to promote educational contributions made by the faculty with positive evaluation.

Chapter 4 Fundamental Principles of Accreditation Criteria

4.1 JABEE evaluates and accredits professional education programs and publicizes accredited programs by the fundamental principles mentioned in (1) to (6) below:

(1) Accreditation is granted by evaluating if a program satisfies the accreditation criteria,

(2) Evaluation and accreditation focus on the items mentioned in (a) to (d) below:

   (a) Whether the leaning outcomes are set up so that knowledge and abilities of the graduates are ensured to be at an appropriate level to meet the requirement of the society,

   (b) Whether the program is implemented appropriately and consistently, complying with the publicized regulation of the institution, syllabus and catalogs of the program,

   (c) Whether all the graduates have achieved all the specified learning outcomes,

   (d) Whether the system functions well for continuous improvement of education.

(3) The originality of the program shall be respected,

(4) Educational improvement in the educational organization shall be supported,

(5) Utilize documents of the other third parties, if judged as sufficiently evaluated,

(6) Evaluation and accreditation shall be implemented with fairness and the confidentiality shall be respected by those involved.

4.2 JABEE shall publicize changes to the four documents mentioned in Chapter 2.2.1

well in advance so that all the stakeholders could have enough time for adaptation; For changes relating to bachelor degree programs, at least four years in advance, for changes relating to master degree programs, at least two years in advance. For urgent changes, or minor revisions, JABEE may publicize changes at least one-year in advance. In case the changes are publicized within less than four years for bachelor degree programs and two years for master degree programs, necessary transitional measures shall be taken.

Chapter 5 Category of Accreditation, and Criteria and Documents applicable to each Category

5.1 JABEE provides categories of accreditation mentioned in (1) to (5) below:

(1) Engineering Education Programs at Bachelor Level[4]

This category is provided to accredit engineering education programs in higher education institution (Bachelor degree programs in universities, or equivalent degree programs recognized by JABEE),

(2) Engineering Education Programs at Master Level

This category is provided to accredit engineering education programs in higher education institution (Master degree program in graduate schools),

(3) Computing & IT-related Education Programs at Bachelor Level[5]

This category is provided to accredit computing and IT-related education programs in higher education institution (Bachelor degree programs in universities, or equivalent degree programs recognized by JABEE),

(4) Computing & IT-related Education Programs at Master Level

This category shall be set up in the future depending on necessity,

(5) Architectural and Architectural Engineering Education Programs at Bachelor and Master Level[6]

This category is provided to accredit architectural education programs consisting of bachelor level programs in architectural and/or architectural engineering, and master level programs in the architectural design and planning in higher education institution (six - year Bachelor and Master degree programs).

5.2 "Criteria Guide" is provided for each category of accreditation.

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[4] Programs accredited in this category are mutually recognized under the Washington Accord, which JABEE joined in June 2005 as a signatory

[5] Programs accredited in this category are mutually recognized under the Seoul Accord, which JABEE joined in December 2008 as a signatory

[6] Programs accredited in this category are mutually recognized under the UNESCO-UIA, which JABEE was certified as an accreditation body in 2009.

5.3 "Rules & Procedures for Evaluation and Accreditation" defines the eligibility of educational programs to apply for evaluation and accreditation.

Chapter 6 Definition of Accreditation Fields

6.1 Each category of accreditation mentioned in Chapter 5 is divided into a number of Accreditation Fields by taking account of the characteristics of profession and academic disciplines, the number of accredited programs, and within the framework of international mutual recognition.

6.2 "Category-dependent Criteria" may contain field specific issues for evaluation and accreditation.

6.3 At the time of application for evaluation, each program shall specify a category of accreditation and an accreditation field.

6.4 Accreditation fields in Category of Engineering Education Programs at Bachelor Level are listed in (1) to (16) below:

    (1)    Field for Chemical and Chemistry-Related Engineering

The bachelor engineering education programs to foster engineers in research and development of chemicals and/or their production processes. It must demonstrate that graduates have thorough grounding in the basic sciences including chemistry, physics, and biology appropriate to the objectives of the program. The graduates also have sufficient knowledge in the application of these basic sciences to enable them to design, analyze, and control chemical, physical, and biological processes consistent with the program educational objectives.

    (2)    Field for Mechanical Engineering

The bachelor engineering education programs to foster engineers in a system for academic and knowledge of technology for the development, design, production, operation and maintenance of mechanical and mechanical systems. Structure of the academic fundamentals for mechanical engineering are based on academic core of analysis focused on dynamics such as material mechanics, thermal dynamics, hydrodynamics and mechanical dynamics, and academic core of synthesis includes engineering related with design and manufacture. This field of engineering education programs is to foster engineers to create things and able to create

values through achievement of academic fundamentals mentioned above and field related study while taking account of human and social circumstances.

(3)  Field for Materials and Metallurgical Engineering

The bachelor engineering education programs to foster engineers in materials, metallurgical, and relevant engineering. All programs in the material related areas share these criteria, including programs with wide-ranging materials (metals, non-organic materials including ceramics, glasses, etc., organic materials including polymers, plastics etc., composite materials, and semi-conducting materials), and the production, manufacturing and application of these materials, and their related fields.

(4)  Field for Resources and Geological Engineering

The bachelor engineering education programs to foster engineers in the fields of resources and geological engineering, and its relevant engineering fields. These items to be considered by field apply to the programs which provide students with the engineering skills and expertise in the fields of geoenvironmental investigation and disaster reduction; exploration and extraction of minerals and energy resources; and resources recycling and environmental conservation.

(5)  Field for Communication, Computer, Software, and similarly named Engineering

The bachelor engineering education programs with communication, information, computer, software, or similarly named technical keywords as modifiers in the titles.

(6)  Field for Electrical, Electronic and similarly named Engineering

The bachelor engineering education programs with electrical, electronic, control, or similarly named technical keywords as modifiers in the titles.

(7)  Field for Civil Engineering

The bachelor engineering education programs to foster engineers in civil, construction and their relevant engineering.

(8)  Field for Agricultural Engineering

The bachelor engineering education programs to foster engineers in agricultural engineering and relevant engineering.

(9)  Field for Multi- and/or Inter-disciplinary Engineering and New-disciplinary Engineering

The bachelor engineering education programs to foster engineers in

principles can only be achieved by integrating multiple engineering fields and difficult to be achieved by individual field or simply by gathering some fields.

(10) Field for Architecture and Building Engineering

The bachelor engineering education programs to foster engineers in architectural and architecture related engineering. It includes architectural history, architectural design, urban design, environmental engineering, structural engineering and architectural product and construction.

(11) Field for Engineering Physics and Applied Physics

The bachelor engineering education programs to foster engineers in engineering and science with physics and applied physics at the core.

(12) Field for Industrial Engineering and Management

The bachelor engineering education programs to foster engineers in Industrial Engineering and Management. The scope covers, in wider perspective, comprehensive system between organization / human being and information. Industrial Engineering and Management comprehensively and with cross-cutting approach utilizes concept of management and its methods, knowledge, and an ability to apply which are appropriate to the business management.

(13) Field for Agricultural Science and Engineering

The bachelor engineering education programs to foster engineers in agri-based "plant", "animal", "biochemical", "food", "economic", "landscape", "fishery" fields, or multidisciplinary engineering program of these fields.

(14) Field for Forest Engineering

The bachelor engineering education programs to foster engineers in forest engineering and natural environment.

(15) Field for Environmental Engineering

The bachelor engineering education programs to foster engineers in environmental engineering. The Programs aim at giving knowledge, ability and technology to solve environmental problems, while providing knowledge and ability to investigate, understand and analyze environmental phenomena with comprehensive understanding of fundamental field of environmental management, conservation, improvement / restoration and environmental load-reduction.

(16) Field for Biochemical, Biological and Biophysical engineering

The bachelor engineering education programs to foster engineers in

biochemical, biological and biophysical engineering.

6.5 Accreditation fields in Category of Engineering Education Programs at Master Level are identical to the fields in the category of engineering education programs at bachelor level.

6.6 Accreditation fields in Category of Computing & IT-related at Bachelor Level are listed in (1) to (4) below:

(1) CS "Field for Computer Science"

The bachelor education programs to foster professionals specialized in the area of Computer Science (CS),

(2) IS "Field for Information Systems

The bachelor education programs to foster professionals specialized in the area of Information Systems (IS),

(3) IT "Field for Information Technology"

The bachelor education programs to foster professionals specialized in the area of Information Technology (IT),

(4) Field for Computing General

The bachelor education programs to foster professionals specialized in computing in general or in an area of multi- and/or integrated- disciplinary computing or of new disciplinary computing.

6.7 Category of Computing & IT-related at Master Level shall be set up in the future depending on necessity

6.8 Accreditation field in Category of Architectural and Architectural Engineering Education Programs at Bachelor and Master Level is listed below:

(1) Field of Architectural Design and Planning

The bachelor and master degree education programs to foster in the broad scope of architecture and urban-related engineer such as, architectural and historical design, architectural design, architectural planning, urban designing, architectural environment, architectural structure and architectural production.

Chapter 7 Remarks

7.1 Revisions and elimination of this document need to be approved by the JABEE Board of Directors. Revisions shall be firstly discussed and coordinated by related committees.