Application of the Result of Evaluation in College of Technology

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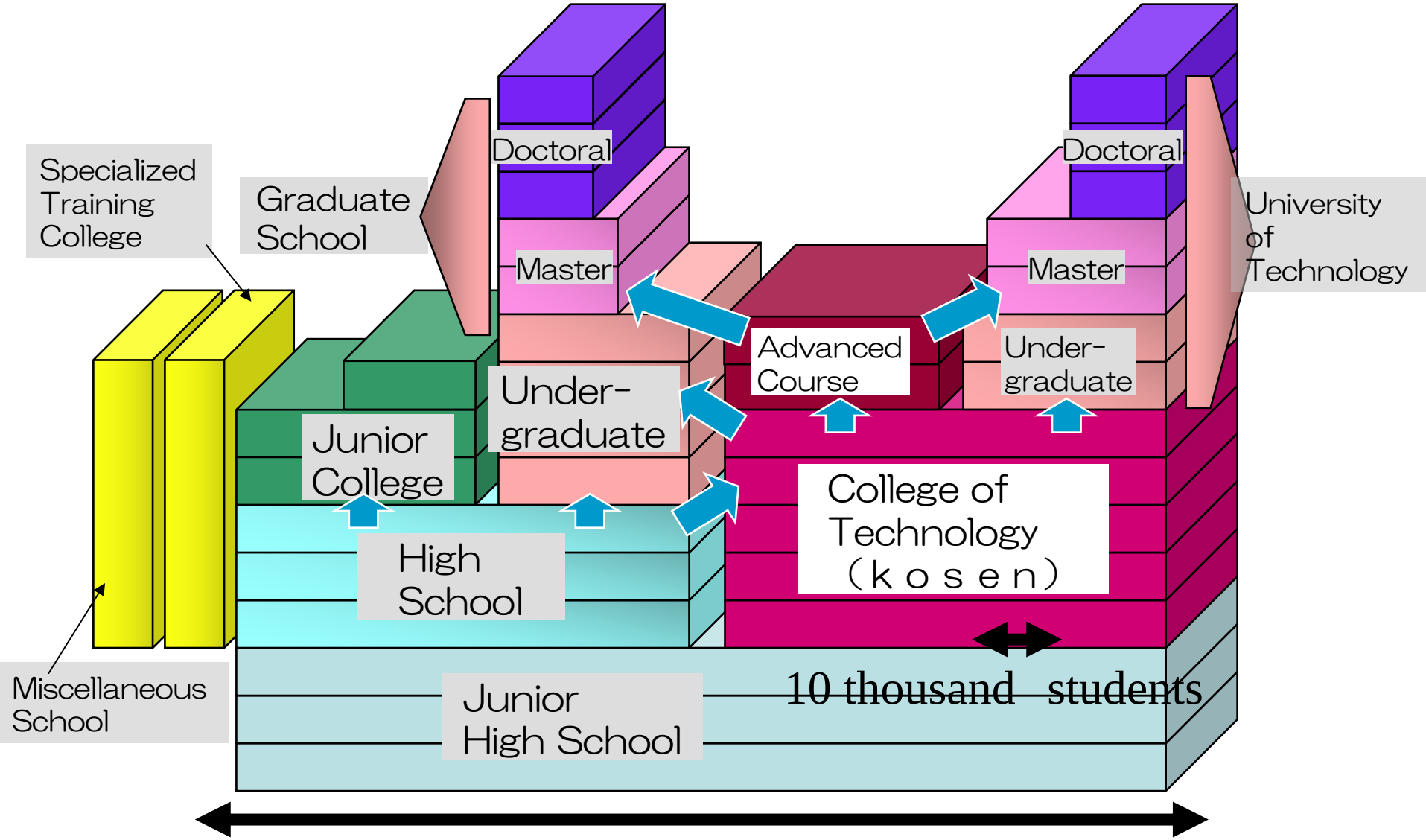
Ⅰ Features of colleges of technology as higher education institutions

Ⅱ Evaluation in national colleges of technology and the application of the result

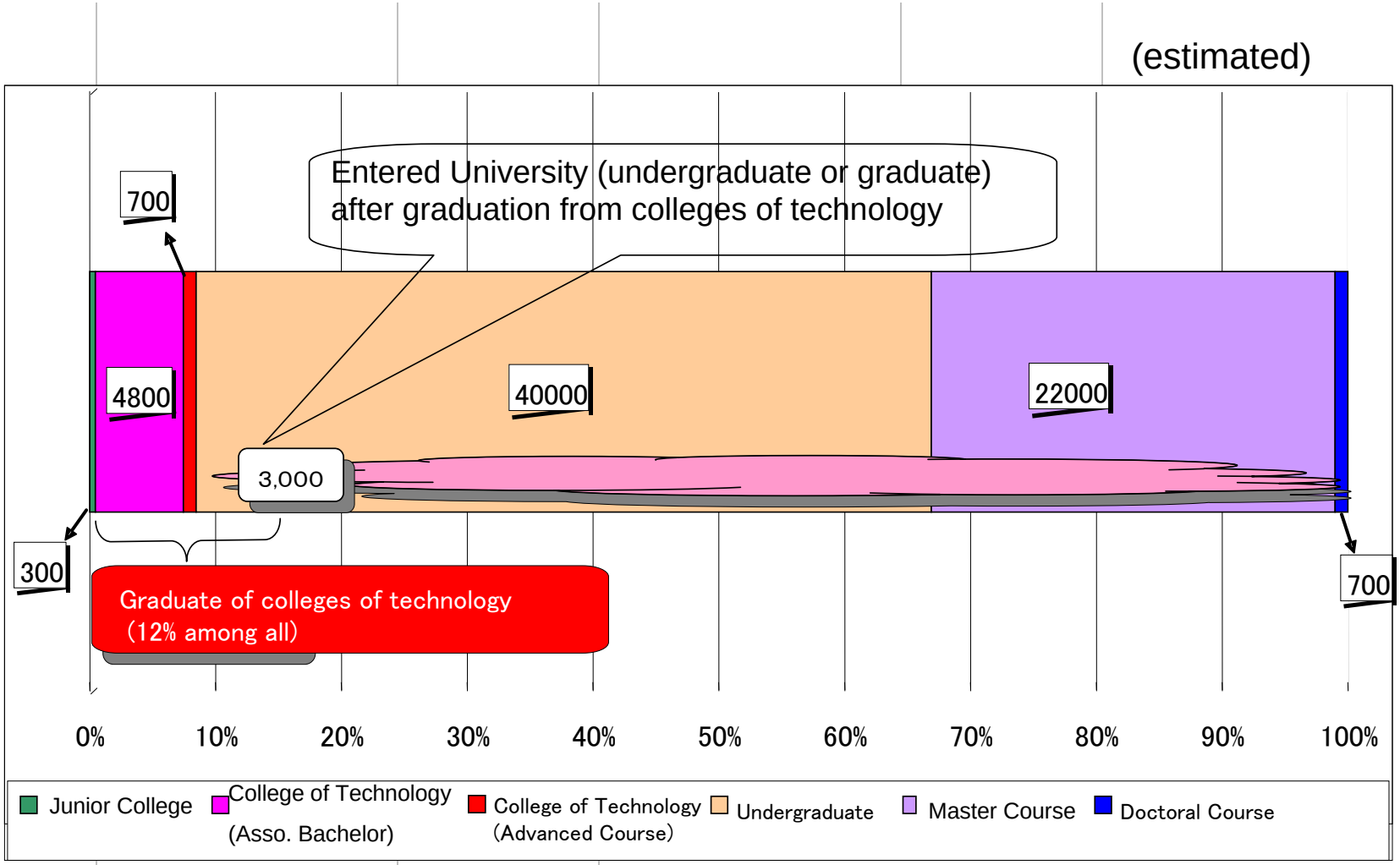
Establishment of Colleges of Technology

- Established in the 1960's in response to strong demand from the industrial sector to foster engineers who develop Japanese high economic growth (economic growth rate of Japan in 1960 was 12%).
- The students enter at a young age (after graduating from junior high school) and receive a consistent practical education for five years.
- Number of colleges: 55 National, 6 Public, 3 Private
  In 2004, the Institute of National Colleges of Technology was inaugurated to manage the 55 national colleges of technology throughout Japan.
- Approximately 300 thousands have graduated so far; graduates contribute mainly in the industrial world, as engineers, researchers, managers, etc.



School System

Ratio of graduates from colleges of technology among new engineers graduated from schools of engineering in 2005



By Statistics of School Education (2005, MEXT) ; Graduates of Advanced Course, College of Technology was counted by the Institute of National Colleges of Technology

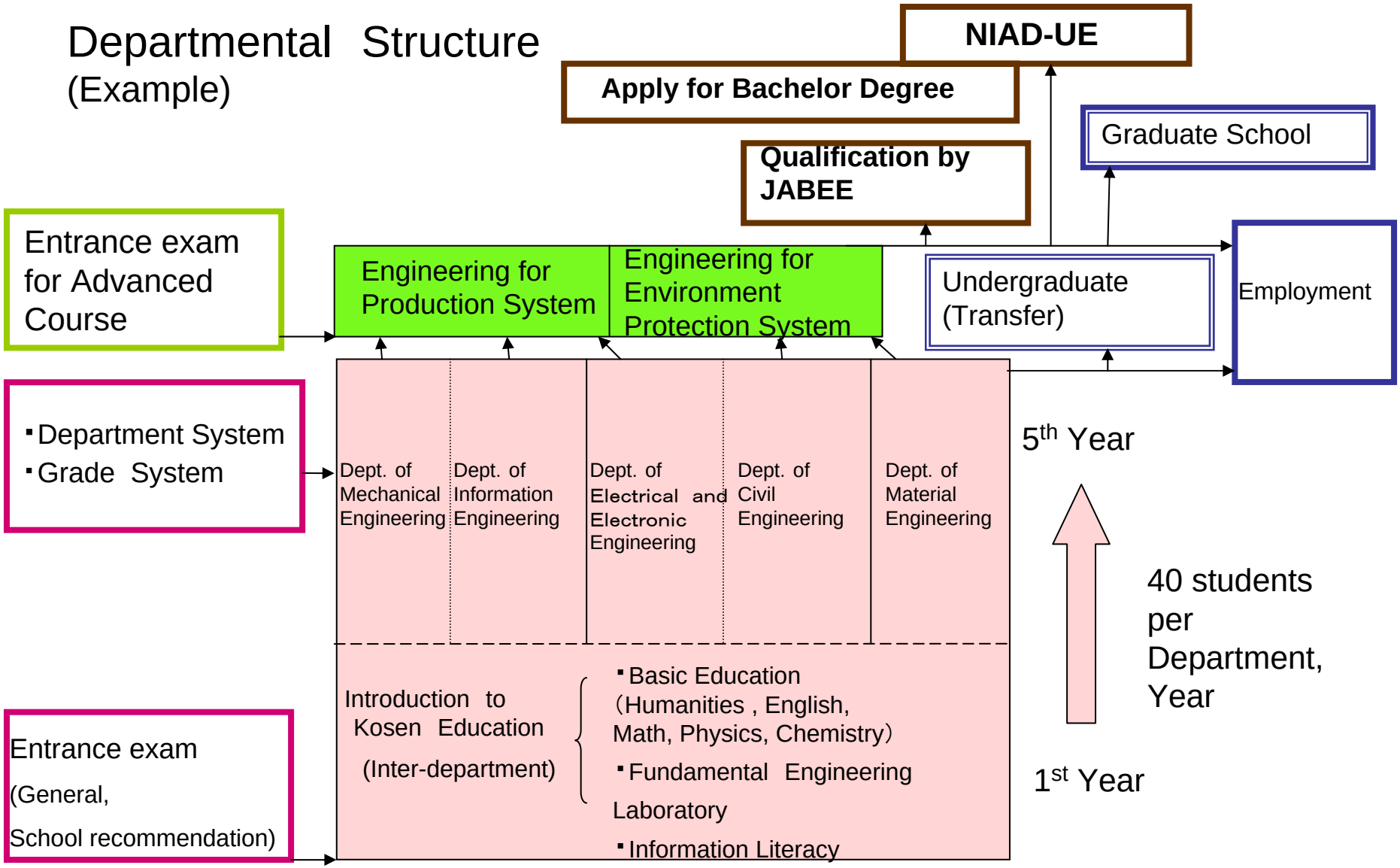
Engineers fostered in colleges of technology

Practical and Creative Engineer with high capacity who play a role in the industrial workplace consisted of interdisciplinary technological fields and develop the technology by originality and ingenuity

Each college has further concrete goals. For example:

- Engineers who follow the proper standard for engineers and have cooperative attitude and leadership in the group
- Engineers who have the capacity for cross-cultural understanding and communication
- Engineers who have distinguished basic achievement and special achievement (idea for production, skill for analogy, skill for structuring), and have the capacity for sustainable self-enrichment

Departmental Structure
(Example)



(Tokyo National College of Technology)

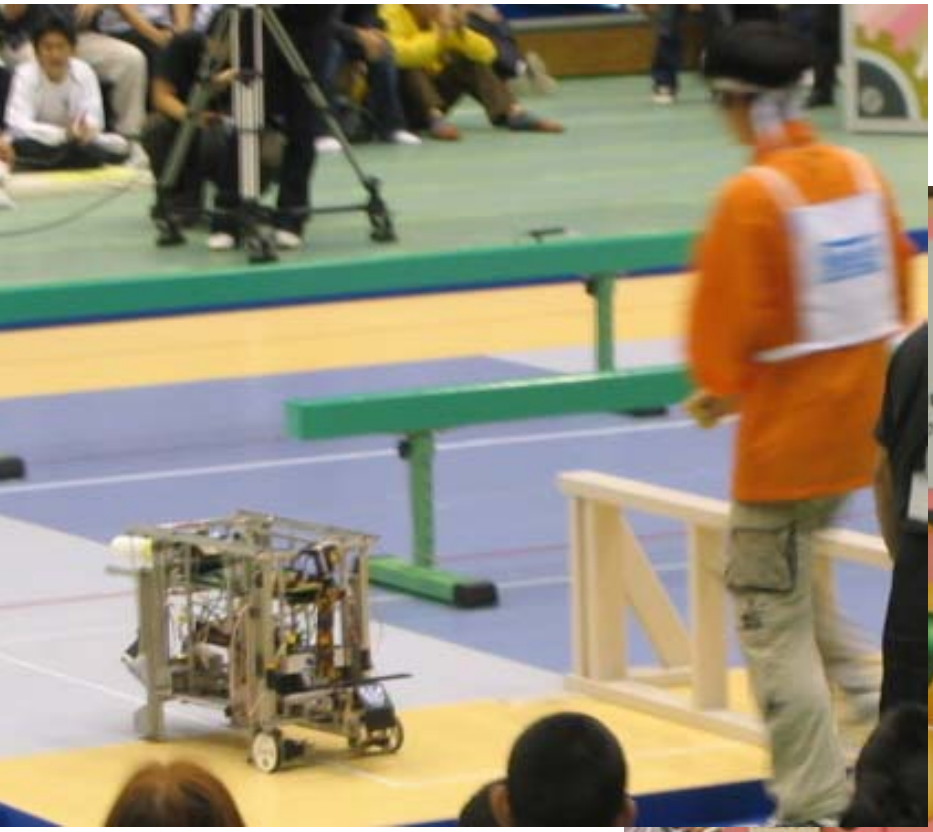
Machine Practice Workshop

Fundamental Engineering Laboratory

(Department of Electrical Engineering)

(Tokyo National College of Technology)


Fundamental Engineering
Laboratory
(Department of Chemical Science



Robot Contest

Dormitory

(Tokyo National College of Technology)

Characteristics of the National Colleges of Technology

- ✓ Five years of consistent engineering education from 15-year old
  - The curriculum emphasizes experimental work and skills development founded on basic knowledge.
    Scrupulous teaching in small classes.
- ✓ Internship by active cooperation with local industrial sector
- ✓ Inter-college competition such as Robot Contest
- ✓ Student dormitory service
- ✓ Ratio of job offer: 16 job offers for every job seeker

(40% of graduates go on to higher education in the advanced course or transfer to 3rd year of a university (in 2006))

Evaluation for colleges of technology and application of outcome

【Institutional evaluation for colleges of technology】

- Evaluation by NIAD-UE (National Institution for Academic Degrees and University Evaluation)
- Program evaluation by JABEE (Japan Accreditation Board for Engineering Education)
- Part of the evaluation which evaluate the Institute of National Colleges of Technology

Aim of evaluations

- Evaluation by NIAD-UE

  ⇒Assurance and improvement of proper educational organization and quality of education

- Program evaluation by JABEE

  ⇒Assurance and improvement of engineering education as education for special field

- Evaluation to the Institute of National Colleges of Technology

  ⇒Utilize the advantages of scale that 55 colleges are managed by a single corporate body

Evaluation by NIAD-UE

【Viewpoint】

To evaluate the whole activities of the college mainly focused on the educational activities for regular students

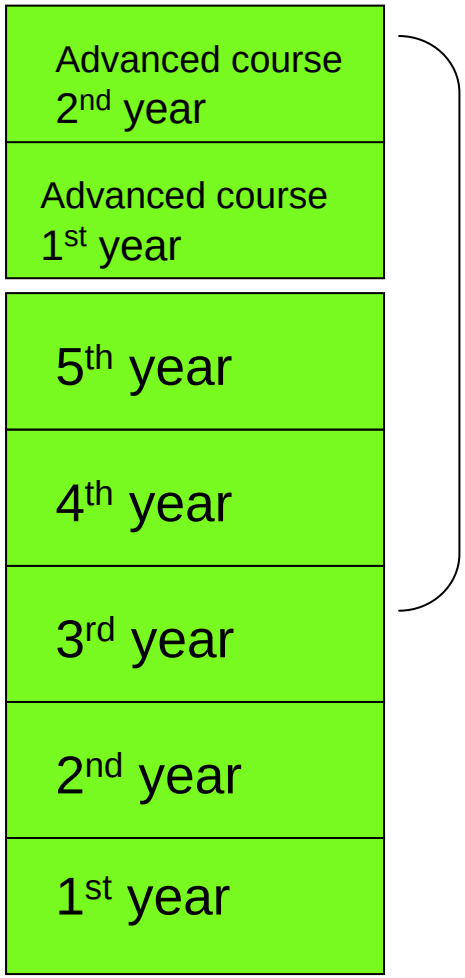
＊e.g.: admission

"An admission policy in which required student qualifications and the basic policy of applicant selection are clearly provided according to the purpose of education is made public and disseminated."

【Application of outcome】

- Colleges review the adequacy of their system and activities in the viewpoint of legal standard, purpose of establishment of the college, etc., through analyzing their activities.
- Through external evaluation, colleges know their strong points and weak points objectively, and make plans to improve their activities .
- Through contributing to the new system , colleges can show their positive attitude toward the accountability to the public.
  (All of national colleges of technology will have the evaluation in the first 3 years from the start of the new evaluation system.)

Program evaluation by JABEE①



Accreditation Institution：
JABEE（Japan Accreditation Board for Engineering Education).

Since last year, JABEE has been a member of Washington Accord – an agreement which provides a mechanism for mutual recognition between signatory bodies of engineering education accreditation processes.

Objective of the Accreditation: Engineering program of undergraduate level. In colleges of technologies in Japan, the program from the 4th or 3rd year of Asso. Bachelor degree course to the 2nd year of Advanced course.

Program evaluation by JABEE②

【Viewpoint】

-Foster independent engineers

-Assure the quality of education by considering the graduates' future course, demands from stakeholders and global recognition

＊e.g. of standards: Recognition of effects of technology to the public and the nature ,and responsibility engineers have to the public (Ethics for engineers)

【Application of the outcome】

- Graduates get motivation and pride as prospective engineers. (Graduates who completed the accredited program are qualified to exemption of the 1st phase of the examination for professional engineer by the notification from Minister of MEXT (Education, Culture, Sports, Science and Technology))

- Incentive for practical foreign language education and introductive education of ethics for engineers.

- Colleges get public recognition as good education institutions for engineers (by getting evaluation through the same standards as other higher education institutions).

Evaluation as a part of evaluation to the Institute of National Colleges of Technology

【Viewpoint】

Evaluation to the Institute as an independent administrative corporation

Achievement through 2004-2008 will be evaluated.

＊examples of annual evaluation：
maintaining the efficiency of applicants
- improvement of entrance examination, advertisement to prospective students

【Application of outcome】

- Colleges know good practices of other colleges through collecting and publication of the examples by the Institute.
- The Institute and colleges share the roles and cooperate with each other for improvement.
- Appeal the strong points of Kosen (college of technology) to the public by getting a good result of evaluation.

Challenges

- ✓ Making a database in the Institute of National Colleges of Technology for effective evaluation
- ✓ Assurance of communication and mutual recognition for keeping reliable relationship between evaluator and institutions evaluated
- ✓ Active application of the result of evaluation and fostering evaluators