ADJUSTING THE LEVEL OF ENGINEERING EDUCATION IN JAPAN THROUGH INTERNATIONAL CONNECTIONS

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ABSTRACT

Our Japanese engineering education programs are improved gradually. Most of our programs were done by Japanese in our University because we had a good text books on Engineering written in Japanese. So we did not have any good opportunities to compare between education programs of ours and other countries. However Japanese Universities are requested to be one of global excellent University with excellent and popular education programs. So we are gradually improving our education program with research activities.

Graduate school of Engineering, Nagoya University started “Japan-US Advanced Collaborative Education Program (JUACEP)” in 2011 by the financial support by Japanese government. JUACEP is a research-based educational program designed for graduate students who desire to study abroad. Scholarships are offered to both Nagoya and American university students. The program presents the perfect opportunity for students to gain engineering research experience as well as cultural experience in the USA or Japan.

In 2011, the Graduate School of Engineering at Nagoya University was awarded the "Re-Inventing Japan Project" grant by the Ministry of Education, Culture, Sports, and Technology (MEXT), along with six other Japanese universities. The grant supports the internationalization of higher education based on the "New Growth Strategy," whose objective is to provide Japanese University students with more international experience. The Graduate School of Engineering at Nagoya University calls their unique program the "Japan-US Advanced Collaborative Education Program (JUACEP). The Program contents are as shown in Figure 1 below.

After completion of the role of MEXT project, since April, 2016 JUACEP has subsequently gone ahead its program, both for Nagoya Univ. students and for US university's students.

JUACEP's primary focus is research-based education for graduate students. The exchange students stay at partner universities as visiting scholars and conduct independent research. Students can choose from among three courses: short (2-3 months), medium (6 months), and long (8-12 months), depending on their individual motivations and interests. JUACEP offers scholarships not only to Nagoya University students to study in the USA but also to American University students to study in Nagoya. At the moment (2012), Nagoya University has formed cooperative relationship with the University of Michigan and the University of California Los Angeles (UCLA). The research will result in the students' earning partial credit, which is transferable to their base universities.

Uniqueness of JUACEP is summarized in Figure 2. This program was a good for the adjusting stage between both programs because both Universities have a good benefit for involved students and Professors.
Finally, we found that the mismatch of semester between Japan and US Universities was severe problems when we will make this program progress more and more. Some of Japanese University has 2 semesters as April-July and October-January. On the other hand, some of US University has different semesters from Japanese one. So we think that we should consider to establishing new program even if this JUACEP is as fine as an initial attempt.