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Essay

Overview and Expectations of Student Exchange Programs through International Internship



Prasit Prapinmongkolkarn, Professor Emeritus, Dr., Chulalongkorn University, Chairman, The National Broadcasting and Telecommunications Commission, Thailand, Ex. Representative, IEICE Bangkok Section

It is my great honor to be invited by IEICE for a short article on international cooperation through student exchange and internship. Within this context, I would like to share my knowledge and experiences with you, which I have gained while I was working as a Professor of the Department of Electrical Engineering, Chulalongkorn University (CU) (1976–2004), as a Commissioner of the National Telecommunications Commission (NTC) (2004–2008) and as Chairman of NTC (2008–2011).

Let me begin by introducing CU at first. It is the first academic institution for higher education in Thailand which was officially founded on March 26, 1917. Over the years, it has evolved to become an internationally recognized university with eighteen faculties, eleven research institutes, three teaching institutes and three other affiliated institutes.

In 1935, CU established three separate departments in the Faculty of Engineering (FOE), to foster the growth and advance of various disciplines in the field of engineering. Today, CU has 12 Departments offering Bachelor, Master and PhD degrees. The number of Faculty staff is 314 and the ratio of students to the Faculty staff is around 10 : 1 in reference to the number of students listed in Table 1.

Table 1 Current scale of Faculty of Engineering in Chulalongkorn University (the number of enrolled students in 2010)

Grade		Number	Rate
Undergraduate	Male	2,472	76%
	Female	777	24%
	Total	3,249	
M. Eng.		1,112	85%
PhD		191	15%

Following the trend of globalization, students find themselves in need of a good command of English for studying and working abroad. In order to fulfill their expectations, the International School of Engineering (ISE) was established to cover 4 special programs, namely Automotive Design and Manufacturing Engineering (ADME), Aerospace Engineering (AERO), Information and Communication Engineering (ICE) and Nano Engineering (NANO) for the time being.

ISE also provides the internship program to CU students studying at various overseas universities and industries as shown in Table 2. On the other hand, the number of internship students studying in ISE in academic year 2010 is summarized in Table 3. Department of Electrical Engineering has established various Research Laboratories since 1950 as shown in Fig. 1. These Laboratories accommodate international internship students. The internship program is a compulsory course work with credits during the three month summer vacation, authorized in the normal curriculum. Both local and overseas industries such as NEC, NTT etc. generously have accepted CU students.

On the other hand, the new National Broadcasting and Telecommunications Commission (NBTC) which merged

Table 2 Overseas Internship Program for international students dispatched from Chulalongkorn University in 2010

Recipient	University, Institution	Industry	Number of Students
USA	6	0	17
Canada	2	0	3
Japan	3	2	10
China	0	1	1
Hong Kong	0	1	1
Taiwan	1	0	1
Korea	1	0	2
Singapore	1	0	1
Sweden	1	0	2
Denmark	0	1	2
Germany	1	3	6
France	1	0	1
UK	3	0	10
Australia	0	1	1
Total	20	9	58

Table 3 Overseas Internship Program for international students dispatched from Chulalongkorn University in 2010

Program	Local	Overseas	Total
AERO	35	4	39
ADME	54	10	64
ICE	80	6	86
NANO	34	37	71
Total	203	57	260

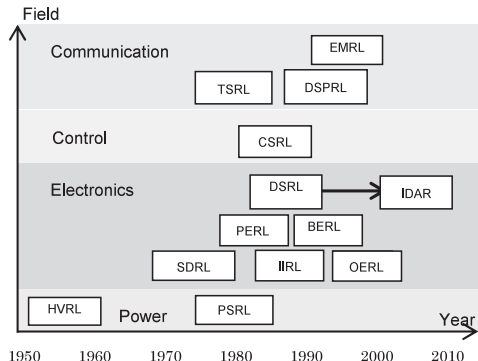


Fig. 1 Evolution of research laboratories based on the future perspectives of Electrical Engineering field

- HVRL High Voltage Research Laboratories (RL)
- SDRL Semiconductor Device RL
- PSRL Power System RL
- TSRL Telecommunications Systems RL
- PERL Power Electronics RL
- CSRL Control Systems RL
- IDAR Integrated Circuit Design Application Research
- IIRL Industrial Instrumentation RL
- BERL Bioelectronics RL
- DSPRL Digital Signal Processing RL
- EMRL Electro-Magnetic RL
- OERL Optoelectronics RL

NTC with National Broadcasting Commission (NBC) was established with 11 commissioners approved by House of Representatives in November 2011, grants more than 30 scholarships to both undergraduate and graduate students to study overseas at many prestigious universities around the world. Before that, NTC has granted various internships for

