



## **Toward Success of Collaborative Program In School of Engineering Between the US and China**

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# **Toward Success of Collaborative Program In School of Engineering Between the US and China**

## **Abstract:**

In 2013, the University of Bridgeport (UB) in the United States (U.S.) and the Wuhan University of Science and Technology (WUST) in People's Republic of China (China) agreed on an undergraduate collaborative program in electrical engineering. Students admitted by Department of Electrical Engineering (EE) at WUST will study in China for 2 years, then students can be transferred to the same program at UB in the U.S. for the remaining academic requirements at UB. Upon the completion of all graduation requirements at UB, students will receive a Bachelor of Science in EE from UB. Students who complete all four years at WUST or transfer to UB after two years, will be granted a Certificate of Graduation and a Bachelor's degree from WUST after satisfactorily completing of the program requirements. There are several important characteristics of the program between UB and WUST: (1) the program focuses on a specific academic program, so both universities design the program that fits students at WUST; (2) a collaborative program by transferring the credits earned at the other institution; and (3) UB professors visit WUST to teach courses, while WUST faculty members from China visit UB for professional developments as visiting scholars. As a result of the program, eight WUST students have transferred to UB at the junior level in Fall 2015, and about twenty students are expected to transfer to UB in Fall 2016. In this paper, we discuss the details of the program, and characteristics of it. We also present the results of a students and faculty survey conducted to evaluate the expectations and outcomes of the collaborative program.

## **1. INTRODUCTION**

Due to the recent growth of the Chinese economy, it is highly desired for people in China to have global educational opportunities, such as learning English, studying abroad, and participating global programs. On the other hand, the universities in the U.S. have been pursuing diversity in student populations at their institutions with growing number of international students, faculty and programs. Therefore, there have been a lot of collaborative program initiatives between the universities in the U.S. and the universities in China with various types of programs including academic degree programs, exchange programs, summer programs and research programs. According to information released by the Chinese Ministry of Education (MOE) in the International Journal of Comparative Education and Development (Comparative Education Bulletin), by 2013 more than 1,200 Sino-foreign cooperative schools and programs with 30 countries of origin of the foreign partner university were approved by the Chinese authorities [12].

Table 1 shows the summary of global academic program between the U.S. and China selected from ASEE annual conference and ASEE International Forum. For instance,

University of Dayton and Shanghai Normal University have been developing and operating a 3 + 1 joint degree program since 2006 [10]. The first three years of the program are taught and managed by the university in China, then students transfer to the university in the U.S. to get an undergraduate degree in engineering. On the other hand, Worcester Polytechnic Institute sends their students to a university in China during a summer for global project [11]. As shown in the table, there are variety of programs in terms of types, characteristics and participants of the programs.

Table 1. Survey of Global Academic Program between the U.S. and China

University in US	University in China	Type of Program	Major(s)	Year in US	Remarks
AASCU <sup>1</sup>	CCIEE <sup>2</sup>	student's visiting	Electrical Engineering	2Y	1+2+1 program, i.e., return to China after 2 years [4]
Lawrence Technological University	Shanghai University of Engineering Science	Prof. visiting	Engineering	0	LTU professors visits SUES to teach courses within 4~5 weeks [5]
Oakland University	Multiple Universities	dual degree	Engineering	2Y	OU + 3 Chinese Universities
University of San Diego	Southeast University	Training program	Electronics Engineering	0	Developing training program [6]
Georgia Tech	Peking University	Research program	Biomedical Engineering	1Y	China Undergraduate Research Experience [7]
Western Michigan University	Sichuan University	Summer program	Engineering	1M	Summer tour to China [8]
University of Calgary (Canada)	Shantou University	Exchange program	Engineering	10D	Exchange program including activities and lecture [9]
University of Dayton	Shanghai Normal University	Joint program	Electrical Engineering	1Y	3+1 joint degree program [10]
Worcester Polytechnic Institute	Huazhong University of Science and Technology	Project based	Engineering	2M	WPI students visit China for 2 months to perform the global projects [11]

In 2013, the University of Bridgeport (UB) in the United States (U.S.) and the Wuhan University of Science and Technology (WUST) in People's Republic of China (China) agreed on an undergraduate collaborative program in electrical engineering. Students admitted by Department of Electrical Engineering (EE) of WUST will study in China for 2 years, then students can be transferred to the same program of UB in the U.S. for the remaining academic requirements at UB. Upon the completion of all graduation requirements at UB, students will receive a Bachelor of Science in EE from UB. Students who stay all four years at WUST or transferred to UB after two years, will be granted a Certificate of Graduation and a Bachelor's degree from WUST if they are subject to satisfactory completion of the program.

<sup>1</sup> AASCU: American Association of State Colleges and Universities

<sup>2</sup> CCIEE : Chinese universities to the China Center for International Education Exchange

### *About UB*

The University of Bridgeport was founded in 1927 as the Junior College of Connecticut – the first junior college chartered by any legislature in the northeastern states. In the words of its founders, the college’s purpose was to develop in students “a point of view and a habit of mind that promotes clear thinking and sound judgment in later professional and business experience.” UB maintains its primary commitments and holds fast to its values. Academic programs are offered through thirteen schools, colleges and institutes. Concern for student development and support predominate. A career-oriented focus in academic programs is complemented at the undergraduate level with a state-of-the-art core curriculum that helps students secure competencies for lifelong learning and knowledge about our world. The School of Engineering of the University of Bridgeport provides comprehensive education and research opportunities to a diverse community in engineering, sciences, and the application and management of technology. The School prepares students for leadership and technology positions in industry, government, and academia and significantly contributes to the profession and community locally, nationally, and globally. The School offers a distinctive education in fundamental and emerging disciplines through its faculty and institutional partners. The education features an application-oriented approach to interdisciplinary issues and opportunities that balances theory with real world state-of-the-art practices. As of Spring 2016, the school offers three undergraduate programs and eight graduate programs including six master’s degree and two doctoral degree programs. Specifically, Electrical Engineering program offers both undergraduate and master’s degree program [1,3].

### *About WUST*

Located in Wuhan of central China, Wuhan University of Science and Technology (WUST) is a key public higher learning institution claiming traditional strengths in engineering and sciences that are integrated with contemporary popular disciplines such as medicine, economics, management, humanities, art, law, and philosophy. Currently WUST operates under the joint aegis of Hubei Provincial Government, Ministry of Education of PRC and six largest mega steel enterprises in China. For over 32, 000 full-time students hosted by 20 colleges and schools, 32 research centers, WUST now offers 71 undergraduate, 130 plus master’s, 36 doctoral and 5 post-doctorate programs, with some claiming to be the strongest in the country. It is also the home of a key national laboratory (in refractory materials and metallurgy), 2 key laboratories accredited by MOE, and 8 accredited by Hubei Provincial Government. In the late 1980s WUST emerged as a pioneer in international education in Hubei province. Its International School (WUST International) is a highly regarded educational institution in the country that provides local students with education of an international standard through partnerships with universities from different parts of the world. At present WUST International co-runs three joint programs at undergraduate level that have been approved by the Ministry of Education, PRC including BE in Electronic Information Engineering jointly run with UB [2]. Graduates of the programs are expected to be equipped with fundamental knowledge, expertise and relearning capacity in related areas as well as a global outlook, science literary and innovative mind, which can prepare them for

a fulfilling career in engineering as a researcher, designer, manufacturer, developer or administrator.

There are several important characteristics of the program between UB and WUST: (1) the program focuses on a specific academic program, so both universities co-design the program such that fits students at WUST; (2) a collaborative program by transferring the credits earned at the other institution; and (3) professors at UB visit WUST to teach courses, while WUST faculty members from China visit UB for professional developments as visiting scholars.

In this paper, we present a three-year experience of collaborative program between UB and WUST. This paper is organized in the following way. In Section 2, we describe our design and implementation of the collaborative program between UB and WUST. Next, in order to evaluate the collaborative program, the assessment plan and its results are presented in Section 3 and 4, respectively. Finally, concluding remarks and future directions are discussed.

## **2. Program Development**

In this section, the collaborative program between WUST and UB is summarized based on the agreement of two parties. In addition, the characteristics and history of the program are presented, respectively.

One main objective of the collaborative program between WUST and UB is to build a degree completion program in which students from WUST, who have fulfilled two years of undergraduate course requirements (which will be discussed in the subsection), may transfer to UB and complete a Bachelor's degree at UB within two years.

### **2.1 Degree Requirements**

WUST students may apply to complete a Bachelor of Science in Electrical Engineering program at UB after completing two years of course requirements at WUST. The two years of course requirements for students on the WUST campus are listed in Table 2. As shown in the table, total of sixty (60) credits including combined credits can be transferred to UB when WUST students get an admission and transfer to Junior at UB.

### **2.2 Admission Requirements**

UB will admit qualified students from WUST if they satisfy the admission requirements and conditions indicated below:

- *English Proficiency*: Applicants should have a minimum of 75 (IBT) scores on the TOEFL or a minimum 6.0 score of the IELTS. Applicants who do not have the required TOEFL or IELTS score will be given the ELAB test (i.e., English

Table 2. Two years of Course Requirements of EE at WUST and Transferred Courses to UB

WUST		UB	
Course Name	Credits	Course / Category Name	Credits
Moral Cultivation and Basic of Law	3	Humanities I	3
Mao Zedong Thoughts, Den Xioping Theory and “Three Represents”	6	Social Sciences I & II	6
Fundamentals of Marxism	3	Humanities II	3
C Programming Language	3.5	Introduction to Programming	4
C Programming Language LAB	1		
Circuit Analysis Basis (I)	2.5	Network Analysis I	3
Introductory Practice Experience	0.5	Network Analysis II	3
Circuit Analysis Basis (II)	2.5		
Practice Experience on Electronic Tech.	0.5		
Circuit Analysis Basis Lab	1	Network Analysis I Lab	1
Analog Electronics	4	Electronics	3
Digital Electronics	3	Digital Design I	3
Analog Electronics Lab	1	Network Analysis II Lab	1
Higher Mathematics A (I, II)	5, 6.5	Calculus I, II	4, 4
Complex Function and Integral Transf.	3	Calculus III	4
University Physics B (I, II)	3, 1.5	Physics I	4
MATLAB Programming	2.5	EE Elective I	3
Course Project on Software Technology	1		
Probability Theory and Math Statistics	3	Probability & Statistics	3
Single Chip Microcomputer and Interface	2.5	Differential Equations	3
Integrated Design of Electronic Sys (I)	1.5		
Electromagnetic Field and Wave	2.5	EE Elective II	3
Introduction to Electronic Information	1		
Signals and Systems	4		
<b>Total Credits</b>	<b>68</b>	<b>Total Transferred Credits</b>	<b>60</b>

proficiency test administered by the English Language Institute – ELI) upon arrival at UB. If a student achieves the passing ELAB test score, he or she will be able to matriculate into the degree program. Students who did not achieve the minimum required ELAB test score will be required to take an intensive English course at ELI and upon attaining the required English proficiency will be permitted to matriculate into the degree program,

- *Good Academic Standing:* The applicant should have completed, or is completing, two years of undergraduate course requirements as listed in Table 2 at WUST, and be in good academic standing with a cumulative grade point average of at least 2.85 in terms of US grading system, and
- *Transfer Credit:* To ensure that a student has sufficient credits to graduate within two year at UB, WUST should select qualified students who have fulfilled the course requirements as listed in Table 2. The exact number of transfer credits is determined based on the evaluation of the applicant’s transcript with the specific program requirements. Only credits with a grade of “C” or better are considered for transfer in terms of US grading system.

### 2.3 Graduation

To graduate from UB within two years, the enrolled student must be able to fulfill all graduation requirements for a Bachelor's degree in Electrical Engineering major including the course requirements listed in Table 3. A student may need to extend his or her matriculation beyond two full years if satisfactory progress has not been made in the two full academic years. If students are not able to complete all required subjects at WUST while they are in China for the first two year, the students will be required to take any missing courses at UB. The academic advisors will make every effort to make sure the required courses are included within two years of the study. However, in some cases the student will be required to take additional classes to meet the graduation requirements at UB.

Table 3. Proposed Study Plan at UB (BS in EE) during Year 3 and 4

Semester	Proposed Study Plan at UB (BS in EE)	Credits
Fifth Semester (16 Credits)	PHYS 112 Principles of Physics with Lab	4
	EE 286 Microprocessors	3
	ENGR 111 Intro to Engineering	3
	EE Elective	3
	ENGL 101 Composition & Rhetoric	3
Sixth Semester (16 Credits)	CHEM 103 General Chemistry with Lab	4
	ECON 300 Economics for Engineers	3
	EE 317 Intro to Control Systems	3
	EE 337 Analog Electronics Lab	3
	Fine Arts Elective	3
Seventh Semester (15 Credits)	EE 350/315/316 Communication Lab	3
	EE 364 Programmable Logic Control	3
	EE 346 MEMS (Micro Electro Mechanical Systems)	3
	EE 349 Senior Design Project	3
	EE Elective	3
Eighth Semester (13 Credits)	CPE 315 Digital Design II with Lab	4
	EE Elective	3
	EE Elective	3
	CAPS 390 Capstone	3

### 2.4 Obligations

The obligations of WUST includes:

- Responsible for obtaining and maintaining any and all necessary approvals and registration to operate the program by the government and all relevant authorities in China,
- Design and prepare publicity and advertising materials for the program and undertake marketing in China to generate applications; notify prospective students of the features and advantages of the program,
- Responsible for teaching organization of the courses offered on the WUST campus including providing appropriate number of qualified and experienced teachers to deliver teaching,

- Provide venues, facilities, materials, equipment and supporting staff that are necessary for teaching,
- Permit and assist UB representatives to make occasional presentations on WUST to students who are interested in completing a degree at UB,
- Recommend qualified students for the program,
- Submit application with support documents,
- Oversee and assist in the admission application and the visa application processes, and
- Provide the applicants with the appropriate departure orientation.

In addition, the obligations of UB includes:

- Responsible for obtaining and maintaining any and all necessary approvals and registration to operate the program by the government and all relevant authorities in the U.S.,
- Participate in the design of the curriculum, introduce courses thereto as required by the program, share curriculum materials and syllabi, and administer course assessment,
- Responsible for teaching organization of courses offered by UB on WUST campus as mutually agreed, including providing qualified and experienced teachers to deliver teaching,
- Provide current information on the program such as academic calendar, costs and fees, and guidelines for application for admission,
- Review the applications and send qualified applicants a Letter of Acceptance and documents for visa application,
- Provide Conditional Acceptance Letter to the student upon enrollment in WUST,
- Arrange on-campus housing and participation in a meal for the students, and
- Provide appropriate orientation for the students upon arrival.

## 2.5 Program Characteristics

There are several important characteristics of the program between WUST and UB.

- First, the collaborative program focuses on specific academic program, so both institutions mutually design the program that fits to students at WUST. Currently, EE major is operated under the collaborative program,
- Second, the collaborative program allows WUST students to receive degrees from UB and WUST upon the completion of all graduation requirements at each institution by exchanging the credits earned at the other institution, and
- Third, professors at UB visit China to teach courses directly during shorten period time, which is usually four to five weeks. Every semester UB professors visit China to teach selected courses for freshman, sophomore and junior classes. On the other hands, WUST professors also visit UB as a visiting scholar.



## 2.6 Program History

UB has been recognized one of the most international universities in US with the 15% of international undergraduate student body by the Best Colleges – US News and World Report [11]. With UB's focused international characteristics, the University also has been in collaboration with various higher education institutions in different countries, for a variety of collaborative programs including exchange of faculty for instruction, research, lectures and establishing collaborative academic programs for undergraduate and graduate degrees. Over the course of a few years UB very successfully established and implemented collaborative degree awarding programs with Chinese universities of high academic ranking. One good example of such a collaborative program is the US-WUST 2+2 collaborative program in Electrical Engineering.

In October 2011, after an in-depth study and discussions UB and WUST agreed and signed an agreement to develop a collaborative degree program of Bachelor of Engineering in Electronic Information Engineering which will be offered on the WUST campus. This agreement was subject to the approval by the Chinese MOE. After the institutional agreements were signed the agreement was submitted to the MOE in Beijing, China, so that this collaborative program is fully recognized and accredited by the Chinese government. In Spring 2012, WUST obtained an official approval from the MOE and started recruiting for the first class in Fall 2013. The program has grown very significantly since. The program enrollment since inception has been as follows – 43 students admitted in Fall 2013, 64 students admitted in Fall 2014, and 72 students admitted in Fall 2015.

## 3. ASSESSMENT PLAN

The evaluation and assessment for the collaborative program between WUST and UB have been conducted under the leadership of Prof. Jeongkyu Lee at UB. In addition, Mr. Brian Lim and Prof. Sarosh Patel at UB are in charge of the evaluation of UB, while Prof. Roger Dianlei Geng and Prof. Zhigang Jiang from WUST conducted the evaluation at WUST.

The objectives of this assessment are two-fold:

1. *Formative evaluation*: to collect the program implementation data to determine the effectiveness of collaborative program, and
2. *Summative evaluation*: to collect the program performance data to support future efforts to assess the program's progress towards its desired outcomes as well as to estimate the impact of the program on its target student populations.

The formative evaluation assess:

- Independent assessment of the collaborative program quality by different parties, such as students, UB professors and non-teaching administrators,
- Students' assessment of the courses that are taught by UB visiting professors at WUST campus, and
- Students' assessment of the program at UB.

Summative evaluation will reflect:

- The students’ performance evaluation for the courses which are taught by UB visiting professors at WUST, and
- The evaluation of program outcomes in terms of enrollments at WUST as new students and enrollments at UB as transferred ones.

Prof. Lee is responsible for the development of assessment instruments that can accurately reflect student perception and collect performance data necessary to document project impact and success. Quantitative and qualitative data analysis are combined for evaluation purposes. The proposed evaluation and assessment plan is presented in detail in Table 4.

Table 4. Evaluation and Assessment Plan

Goal	Evaluation Questions (Sample)	Proposed Methods	Frequency
<i>Formative Evaluation</i>			
Program Quality Assessment	Develop a set of questions to assess effectiveness of program including suggestions for both WUST students and UB professors: <i>Q1: What was the primary reason when you applied to International College at WUST?</i> <i>Q2: Does the collaborative program between WUST and UB meet your expectations?</i>	Student Survey UB Professor Survey	End of year
Course Quality Assessment	Develop a set of questions to assess effectiveness of courses including suggestions: <i>Q3: Is UB professor helpful for you to understand the subject?</i> <i>Q4: Are you able to follow and clearly understand the course instruction in English?</i> <i>Q5: Do the courses (UB professors) meet your expectations?</i>	Student Survey	End of class
UB program Assessment	Develop a set of questions to assess UB program: <i>Q6: If you are at WUST, are you going to transfer to UB?</i> <i>Q7: How much do you know about University of Bridgeport?</i>	Student Survey	End of year
<i>Summative Evaluation</i>			
Students’ performance measure	What is the academic performance of WUST students in the classroom taught by UB professors? - <i>Collecting the average score of each class</i>	Collecting data at WUST	End of year
Program enrollments	What is the performance of the collaborative program between WUST and UB? - <i>Collecting the number of enrollments</i>	Collecting data at WUST	End of year

#### 4. ASSESSMENT RESULTS

In order to assess the collaborative program between WUST and UB, the following surveys were conducted as planned in the previous section:

- *For WUST students:* 160 students responded to the survey and then analyzed, and
- *For UB Professors:* 6 UB professors who visited WUST responded to the survey and then analyzed.

#### 4.1 Program Quality Assessment

To evaluate the collaborative program quality overall, WUST students are asked to response to Q1 and Q2, and their results are shown in Figure 1.

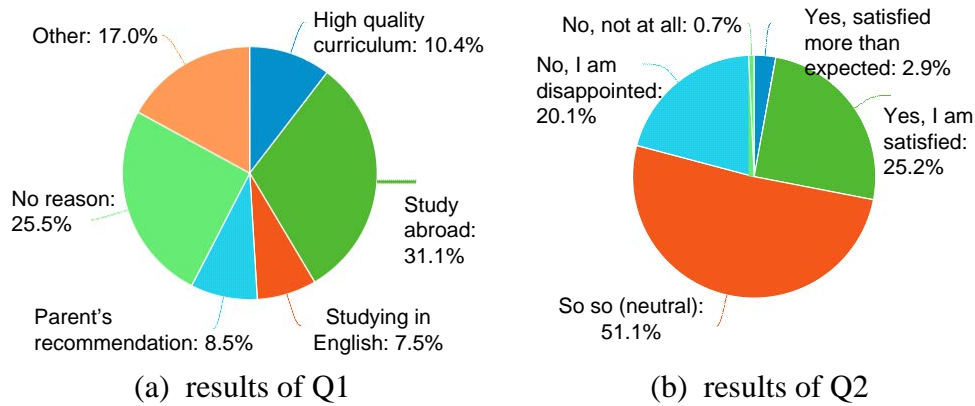


Figure 1. Program Quality Assessment: (a) result of Q1 and (b) result of Q2

As shown in Figure 1 (a), 49% of students selected the international program at WUST because of academic reason including studying abroad (31.1%), curriculum (10.4%), and English (7.5%). On the other hand, 20.1% of students responded negative to the program (see Figure 1 (b)). The results show that overall the collaborative program appeals the students' need and their satisfaction are positive so far.

#### 4.2 Course Quality Assessment

To assess the quality of courses taught by UB professors, Q3 ~ Q5 are asked to WUST students and their results are shown in Figure 2.

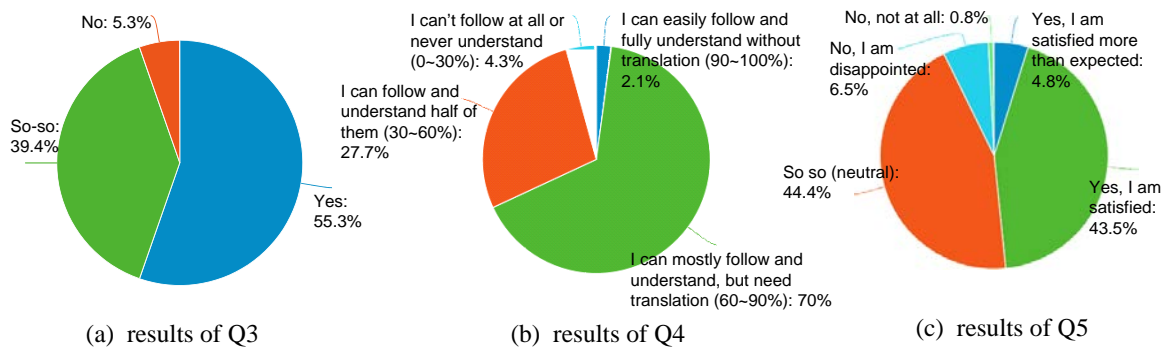


Figure 2. Course Quality Assessment: (a) result of Q3, (b) results of Q4 and (c) result of Q5

As shown in Figure 2 (a), more than 55% of students answered that UB professors are helpful in their classroom, while only 5.3% are negative. Overall, more than 48% of WUST students satisfied with the courses taught by UB professor, while only 7.3% are negative (see Figure 2 (c)). Based on the survey results in Figure 2, the courses taught by UB professors are successful with high students' satisfaction.

### 4.3 UB program Assessment

Due to the limited number of students who transferred to UB program, we have asked WUST students regarding to UB program. Figure 3 shows the results of UB program from survey.

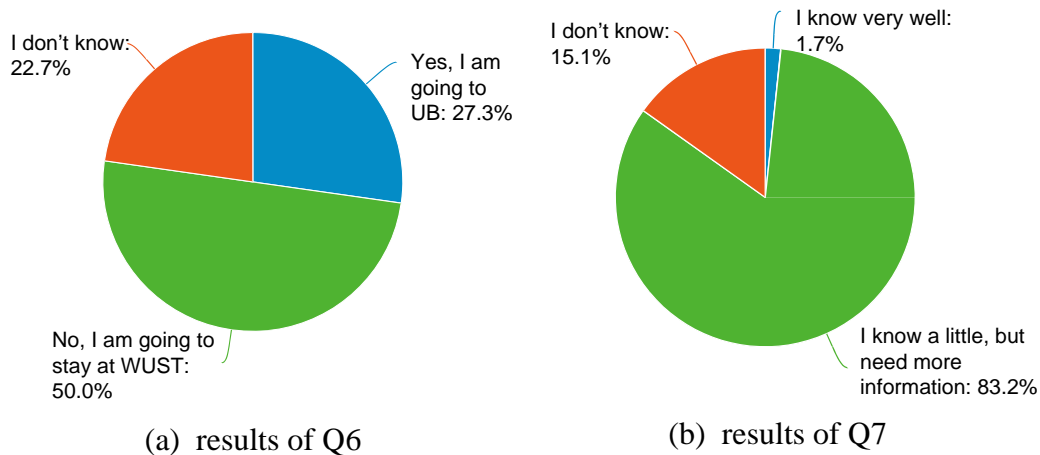


Figure 3. UB Program Assessment: (a) result of Q6, and (b) results of Q7

As shown in Figure3, WUST students do not have enough information about UB, and 27.3% of students decide to transfer to UB after 2 years studying at WUST. The main reasons of not transferring to UB include finance issue and English problem.

### 4.4 Summative Evaluation

In order to conduct summative evaluation of the collaborative program, two data sets are collected as shown in Figure 4. Figure 4 (a) shows the average score of each class taught by UB professors from 2013 to 2015, while Figure 4 (b) shows the number of enrollments and the average cut-off scores in the national college entrance exam at the program since 2013.

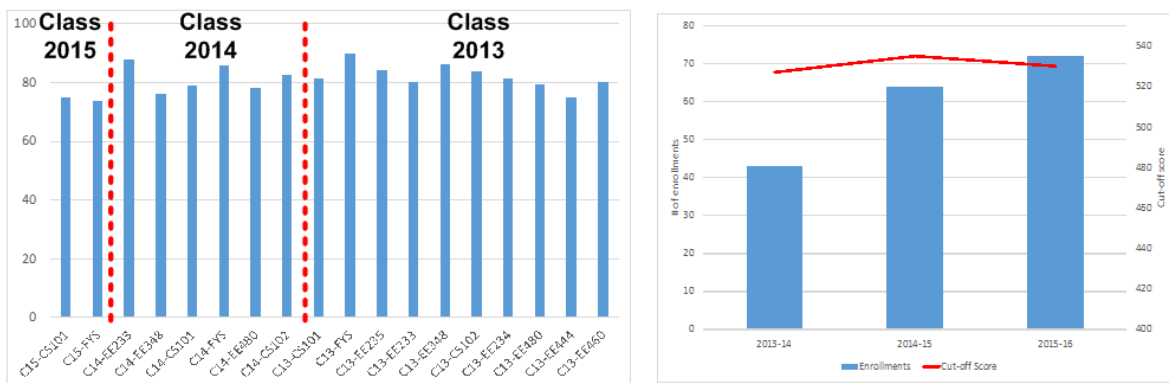


Figure 4. (a) Average Score of Each Class, (b) Enrollment at the Program

As you can see in the figure, the average score of Class of 2014 and 2015 are over 80 (which are equivalent to B- or B grade in UB grading system), respectively, while Class of 2015

shows 75 on average. The results indicate that the freshman have the difficulty on taking classes with foreign instructors in English. Overall, the results of summative evaluation support that the program impacts on the students at WUST and has been improved.

#### 4.5 Lessons Learned

In order to improve the quality of collaborative, WUST students and UB professors are asked to the following questions:

*Q8: To improve the collaborative program, which of the following activities should be enhanced first?*

*Q9: To improve the quality of courses (UB professors), what should be considered?*

*Q10-1: (Student Only) If you do not transfer to UB, what is the main reason to decide to stay at WUST?*

*Q10-2: (Professor Only) What is the best number of weeks for one semester long subject at WUST?*

Table 5 shows the top 3 choices for each group. In order to improve the collaborative program, 55% of students suggest the diverse activities, while UB professors (50%) are interested in the better teaching environment, i.e., lab and classroom. However, regarding Q9, both students and professors selected “longer course period” to improve the course quality. Currently, it is 4 ~ 5 weeks for each class. According to the students’ response of Q10, it is the financial aspect that prevents WUST students from transferring to UB. This should be addressed for the successful program in terms of quantity as well as quality.

Table 5. Top-3 Choices for Q8 ~ Q10

Q#	Response of WUST Students	Response of UB Professors
Q8	<ol style="list-style-type: none"> <li>1. Diverse activities (such as short-term visiting, online conference) (55%)</li> <li>2. Communication between instructors and students (50%)</li> <li>3. Communication between WUST and UB (49%)</li> </ol>	<ol style="list-style-type: none"> <li>1. Facilities (such as laboratory and classroom) (50%)</li> <li>2. Communication between instructors and students (50%)</li> <li>3. Communication between WUST and UB (16%)</li> </ol>
Q9	<ol style="list-style-type: none"> <li>1. Longer course period (currently 4 ~ 5 weeks) (51%)</li> <li>2. Schedule for future courses (41%)</li> <li>3. English translation (39%) Communications with UB professors (39%)</li> </ol>	<ol style="list-style-type: none"> <li>1. Longer course period (currently 4 ~ 5 weeks) (50%)</li> <li>2. Visiting time (currently May and December) (34%)</li> <li>3. More assisting professors (34%)</li> </ol>
Q10	<ol style="list-style-type: none"> <li>1. Financial issue (70%)</li> <li>2. English (12%)</li> <li>3. No interests for studying abroad (9%)</li> </ol>	<ol style="list-style-type: none"> <li>1. 4 ~ 5 weeks (60%)</li> <li>2. 6 ~ 7 weeks (20%)</li> <li>3. More than 7 weeks (20%)</li> </ol>

## 5. CONCLUSION

In this paper, we presented development and implementation of an undergraduate collaborative program in electrical engineering between the University of Bridgeport (UB) in

the U.S. and Wuhan University of Science and Technology (WUST) in China. Students admitted by Department of Electrical Engineering (EE) of WUST will study in China for 2 years, then students can be transferred to the same program at UB for the remaining academic requirements. Upon the completion of all graduation requirements at UB, students will receive a Bachelor of Science in EE from UB. Students who stay all four years at WUST or transfer to UB after two years, will be granted a Certificate of Graduation and a Bachelor's degree from WUST if they are subject to satisfactory completion of the program requirements. In order to assess the quality of collaborative program, we design and conduct the survey for both WUST students and UB professors. The survey results show that the program is successful, since the enrollments have been increasing at WUST and more students plan to transfer to UB. In addition, the WUST-UB joint program was successfully passed the first audit by China Academic Degree and Graduate Education Development Center (CDGDC) in 2015. However, there are several issues in the program that should be addressed for better quality, such as financial issue, teaching environments and communication.

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