

Overseas Reports

【Current Activities of a Former Participant】



Rene-san reported his current activities in Honduras.



- 1) Course Leader: Masataka TANIGUCHI
- 2) Former Participant: Mr. LEON QUANT Rene Antonio

February 10th, 2016


Training Division

Kitakyushu International Techno-cooperative Association

We report on activities being run by former participants playing an active role in their homeland after completing their JICA/KITA training course

This issue of Overseas Reports covers activities being run in their homeland by participants who attended the training course, “Practical Technology for Mechatronics and Robots”. Masataka TANIGUCHI, the course leader who managed the course, introduced us their activity situation.

1. Introduction of the participant, who has given the report

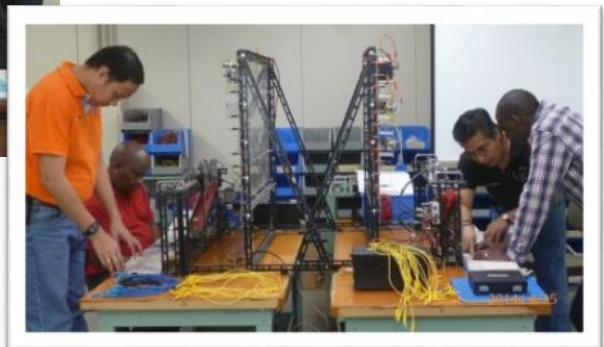
Nickname	Photo	Name	Country	Period of JICA Training Course
Rene – san		Mr. LEON QUANT Rene Antonio	Honduras	Jan. 28, 2014 ~ Apr. 25, 2014



Rene - san

Course leader
M. TANIGUCHI

Rene-san after a lecture, with participants, Mr. TANIGUCHI and the coordinator



Practical training at the JICA

2. Message from Masataka TANIGUCHI, Course Leader



In the industry, the mechanization and systematization of the production is progressing remarkably to enhance competitiveness. On the other hand, in the developing countries with low technical bases and a limited number of engineers, it is strongly demanded to develop mechatronics engineer who acquire mechanical, electric and controlling technology by himself in introducing production system, and maintaining machinery and products for the industrial modernization.

In this course, we aimed to learn and improve practical mechatronics technique mainly on training, practice and the company training. And in action plan, we make training result certain through presentation on the instruction and basic plan of mechatronics or improvement plan in their home country after returning.

Mr. Rene, he is planning to develop a course manual on “Introduction to Mechatronics Engineering” in UNITEC, Honduras based on knowledge and the text earned in JICA training, as his action plan.

He sent email with pictures showing a competition of the computer technology application in UNITEC in March, 2015 based on practice in Japan. And I could guess that he has achieved result steadily.

This course “Mechatronics Robot” had been finished in 2015 but I expect that this technology will be spread all over the world centered on trainees.

Masataka TANIGUCHI

3. Letter from Rene-san



I miss the days spent in Japan and tell students about splendid experience in Japan. I hope that Honduras traces same way as Japan and will develop someday.

I encourage UNITEC students to study hard and not to be selfish.

I really appreciate the training provided by JICA and KITA and I will do all my best to make great influence on Honduras.

Thank you very much.

Title of Report and Contents

Development of a course manual for the "MEC101 Introduction to Mechatronics Engineering" course at UNITEC

Participant: Mr. René A, León

Country: Honduras

Organization: Universidad Tecnológica Centroamericana (UNITEC)

Present post: Academic Head of Electromechanical Engineering

1. INTRODUCTION

Mechatronics Engineering program at UNITEC started in July 2004 as the first, new and innovative program in Honduras university level to meet the necessity of a worldwide industry applying advanced technology for manufacturing and production of their goods. The freshmen student from our program should have a detailed explanation of all aspects that are part of the field of mechatronics to open the scope of this field impact.

2. ANALISYS OF THE PROBLEM

As a new field in the Electromechanics science, mechatronics in Honduras is in its development stage and there are no people in the country with considerable experience. The creation of the program was based on research and exchange of knowledge with professionals from the different areas of electricity, mechanics and computer systems engineering.

3. STATEMENT OF NEEDS BASED ON THE PROBLEM

1. Information exchange and advice from experts in the field.
2. Development of a manual adapted to the region.
3. Explain basic mechatronics topics to students and professionals in the Honduran Industry through a document.

4. PROPOSAL

Development of a course manual for the "MEC101 Introduction to Mechatronics Engineering" course at UNITEC.

This manual will consider all topics and teaching approaches learned at the training course in Japan. The topics to be included in the manual are listed below:

- ❖ Basic Principles of Control Engineering.
- ❖ Mechanism and Kinematic of Manipulators.
- ❖ Pneumatic and Hydraulic Systems.
- ❖ Electronic Circuits.
- ❖ Basic of Inverter Technology.
- ❖ Variable Speed Electric Motors.
- ❖ Numerical Control Machine Tool.
- ❖ Basic of Sensor Technology.
- ❖ PLC Control

This Manual also include an open list of examples of mechatronics used in companies and educational technical institutions in Japan and others known in other countries, (the information will kept updated with a visit to the company's web pages).



A scene of engineering contest
Team competition by cars made with given materials



5. EXPLANATION OF HOW PROPOSAL MEETS NEEDS

A course manual of Mechatronics Topics developed with accordance to the topics covered in the JICA training course (Practical Technologies in Mechatronics and Robots J1300902) and the advice of experts will help us to develop an easy to use document, to achieve the explanation of the basic technologies described in previous section and grouped in the following categories:

- ❖ Basic knowledge and technologies.
- ❖ Elemental technologies.
- ❖ Application at industries (Japan and other countries).

This document will help to expand the vision of mechatronics for the future graduates of the program at UNITEC, obtaining a multiplier effect at the Honduran companies (National or International based) where they will be laboring.

This same document could be used to promote the Mechatronics information directly with Honduran human resources in the industry through UNITEC or country's professional society of Mechanical, Electrical and Chemical Engineers of Honduras and related fields (CIMEQH for its acronym in Spanish)

6. IMPLEMENTATION

1) Role and responsibility

- The participant will have the main role of developing the manual and as Instructor of the course.

2) Resources

- The manual will be created using as a reference the topics covered in the JICA-KITA training course "Practical Technology for Mechatronics and Robots".
- The Manual will take into account the technology seen at the different sites visited in the study trips, as the information of the enterprises that could be found through their Internet Web portals and others known cases of mechatronic implementations.
- All the instructors of the Mechatronics program will be interviewed and their opinion will help the developing of the manual. The lecturers have a coordinated participating time at the Introduction to Mechatronics course.

7. CONCLUSION

With the topics presented in this training program, I was able to obtain an overview of the different fields of mechatronics, from basic technologies to their applications. The field study trips have been a nice addition to observe examples of mechatronics technologies applied in Japan companies, which will serve as active examples to reproduce to the students of the Mechatronics Engineering program at UNITEC.

As a complement, the subjects covered will help to maintain a state of the art Mechatronics Engineering program, sharing the information to our staff of lecturers at UNITEC.



Photo Album of the JICA/KITA Training Course



Closing ceremony of “Practical Technology for Mechatronics and Robots” course,
April 24th, 2014



Rene-san’s presentation for his Job Report



The participants with Mr. Taniguchi



Field study at the course



Field study of Robot