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Building and Sustaining Capacity (Strategies for Training, Networking and Knowledge Management)

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# International Training Program on Nuclear Engineering at Kinki University

Kinki University

Atomic Energy Research Institute

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# Introduction

- Japanese government decided the nuclear power as an important “Base Load Electric Power” in the Master Plan for Energy Supply in 11 April 2014.
- Demands for nuclear technician in Japan is predicted to increase in the coming some decades.
- MEXT\* Japan invited Human Resource Development Program on Nuclear Engineering, and Kinki Univ. suggested a international training program in 2013. The Program was adopted as a 3-years program since 2013.

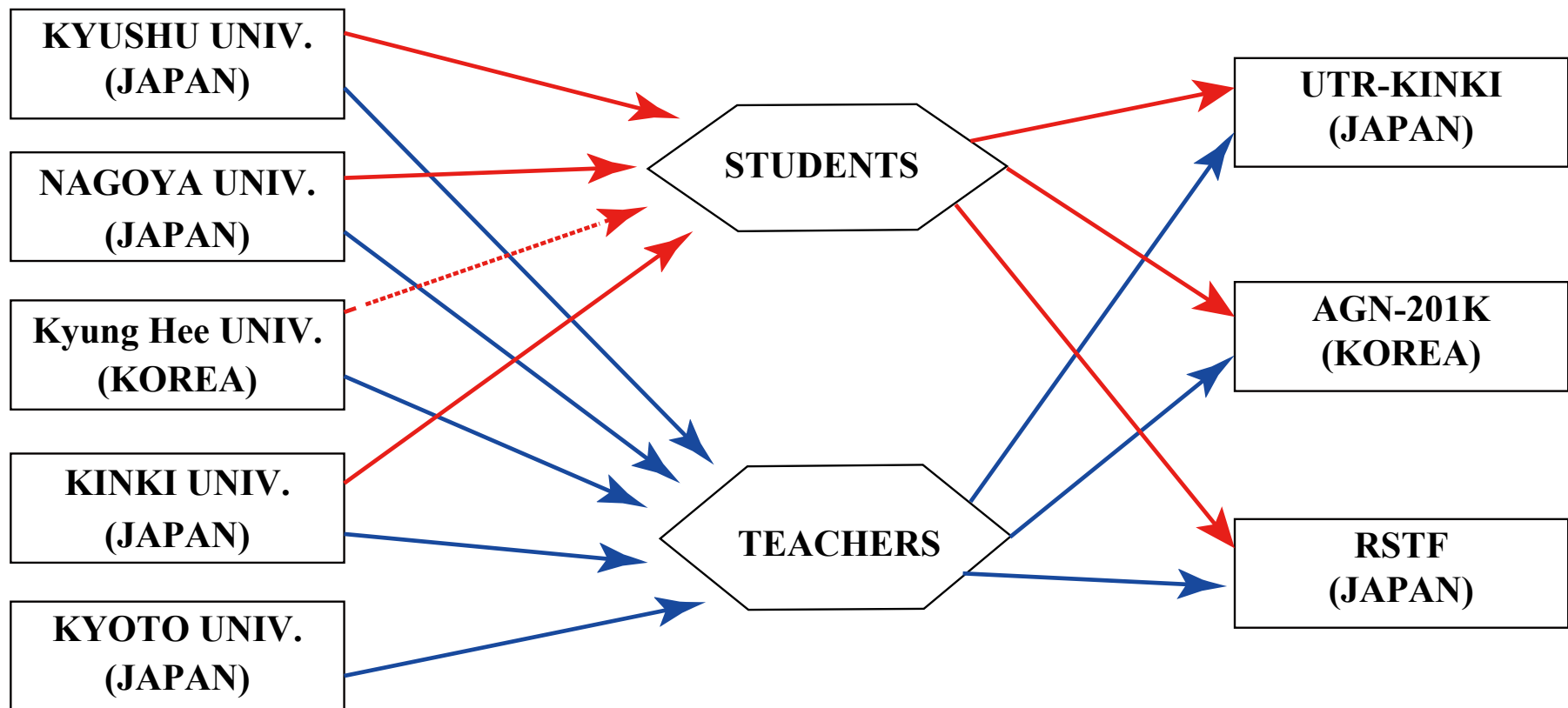
\* Ministry of Education, culture, sports, science and technology

# Outline of the Training Program

- This training program is a 3-years program since 2013.
- This program is conducted with 5 universities' cooperation.(Kyushu Univ., Nagoya Univ., Kyung Hee Univ., Kyoto Univ. and Kinki Univ.)
- Educations are provided in 3 experimental field.(Kinki Univ. Reactor: UTR-KINKI, Kyung Hee Univ. Reactor: AGN-201K, Reconstruction Support Test Field in Fukushima: RSTF)
- A language used in the program is English which is not mother tongue for both Japanese and Korean students.

# International Training Program for Nuclear Engineering

- Students and Teachers from several universities join the program, and the education is provided with cooperation.



Solid Line: Traveling fee is Supported in this program

Broken Line: Traveling fee is NOT Supported in this program

# Experimental Field

Kinki Univ. Reactor  
(JAPAN)  
NAME: UTR-KINKI  
For Nuclear Engineering



MAX 1W in thermal.  
Used for Japanese  
Nuclear Education in  
this 52 years.

Kyung Hee Univ. Reactor  
(Korea, Republic of)  
NAME: AGN-201K  
For Nuclear Engineering



MAX 10W in thermal.  
Used for Korean  
Nuclear Education in  
this 31 years.

Reconstruction Support  
Test Field  
(Fukushima, JAPAN)  
NAME: RSTF  
For Field Monitoring



Agricultural pilot plant  
for reconstruction from  
Radioactive Hazard.  
Commissioned in 2012 at  
Kawamata town of  
Fukushima.

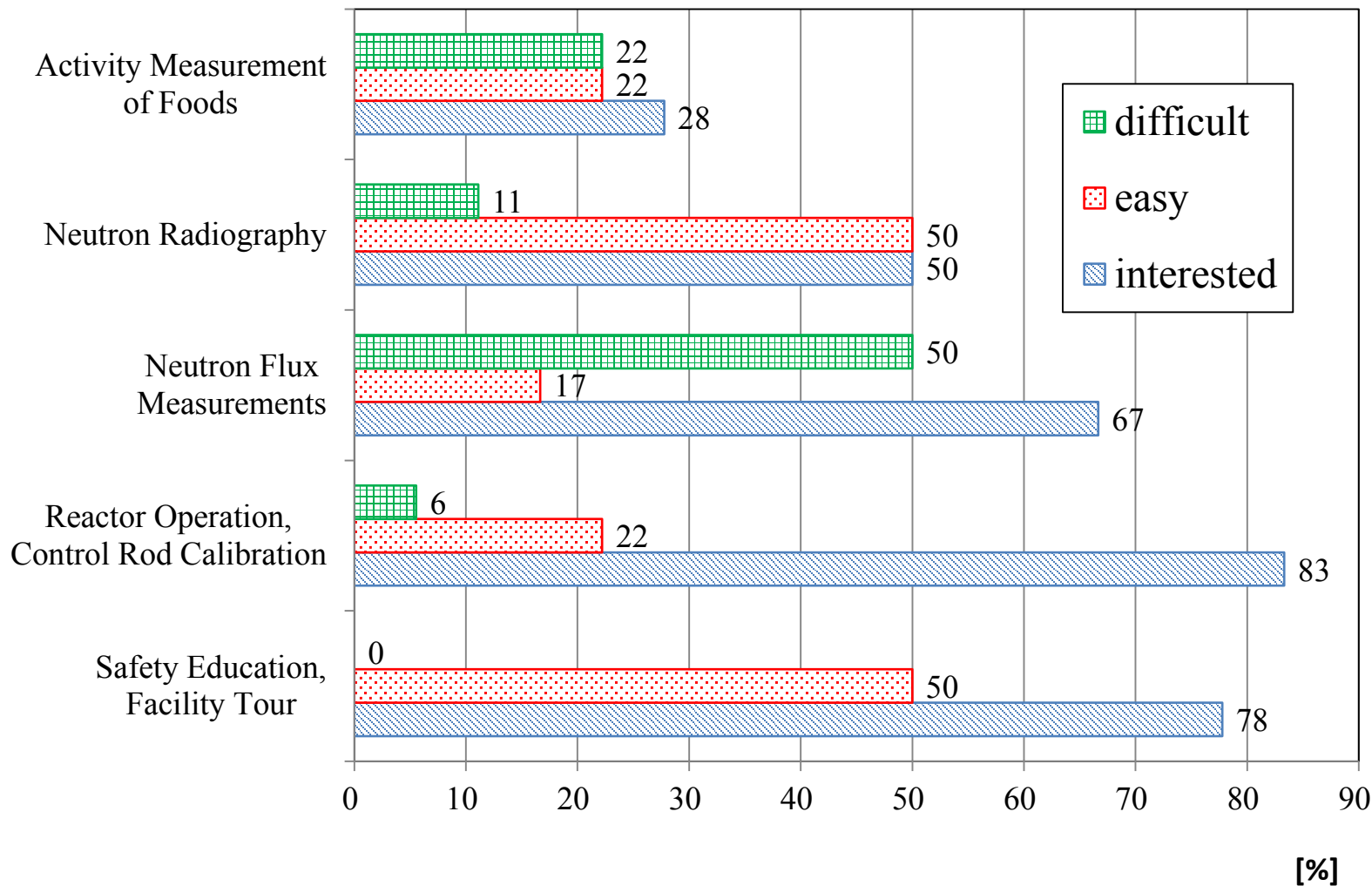


# Schedule of the training program in 2013 (@ UTR-KINKI)

Day 1 (22 Nov. 2013)	Day 2 (23 Nov. 2013)	Day 3 (24 Nov. 2013)
<p><i>Safety Education</i> <i>Facility Tour</i></p> <div data-bbox="144 639 629 921" style="border: 1px solid black; padding: 5px;"> <p>(Group A) <b>Reactor Operation</b> <b>Control Rod</b> <b>Calibration</b> <b>Dose Rate Measurement</b></p> </div> <div data-bbox="144 925 629 1206" style="border: 1px solid black; padding: 5px;"> <p>(Group B) <b>Neutron Flux</b> <b>Measurement</b> <b>Energy Spectrum</b> <b>Measurement</b></p> </div>	<div data-bbox="738 444 1222 725" style="border: 1px solid black; padding: 5px;"> <p>(Group A) <b>Neutron Flux</b> <b>Measurement</b> <b>Energy Spectrum</b> <b>Measurement</b></p> </div> <div data-bbox="738 729 1222 1011" style="border: 1px solid black; padding: 5px;"> <p>(Group B) <b>Reactor Operation</b> <b>Control Rod</b> <b>Calibration</b> <b>Dose Rate Measurement</b></p> </div> <p><b>Neutron Radiography</b> <i>Fukushima's Environment</i> <b>Foods' Activity</b> <b>Measurement</b></p>	<p><i>Nuclear Industries'</i> <i>situation</i></p> <p>Summary &amp; Discussions</p>

Italic-style items are *Lectures* and Bold-style items are **Experiments**.

# Answers of the Paper Form Asking (Which experiment is difficult or easy?)





# Answer of the Paper Form Asking (from Free Writing Form)

- It was harder to listen engineering English than to understand the experiment itself.
- It was very good experience to contact with foreign students.
- Very good program. However, I miss to listen some sentences (It's because of a lack of my English proficiency), I wish you to have some care, for example, repeating sentences or so on.
- I feel so interesting. Reactor operation was very good experience for me. This program was good for not only studying nuclear physics but also studying English.
- Reactor operation was a meaningful experience. I realized a difference of English proficiency between Japanese students and Korean students, so I'll study English harder.
- I was really enjoyed. Thank you for good program.

# Take Away

- Kinki Univ. conducts a international training program on a cooperation with Kyushu Univ., Nagoya Univ., Kyung Hee Univ. and Kyoto Univ.
- Students of Kyushu Univ., Kyung Hee Univ. and Kinki Univ. got educations on this program in 2013.
- Educated students learned nuclear physics and radiation measurements through some lectures and experiments.
- Some students realized an importance of international communication through this program.