

Cooperation between Korea Nuclear Association with Universiti Kebangsaan Malaysia

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Introduction

Based on the initial interest showed by the Malaysian government on embarking the Nuclear Power Programme in 2011 , followed by the setting up of the Malaysian Nuclear Power Corporation in the same year and various visits to South Korea both by the Malaysian academics, ministers and other government bodies , KNA and UKM held their first MOU in 2014 in view of the fact that UKM is the only Malaysian university giving a Nuclear Science degree since 1980. This was renewed in 2016 and expected to be further renewed in 2018 .

Basis of cooperations

The basis of cooperation has been roadmapped into the phases of : (i) South Korea's technical and academic familiarization (visits to universities and nuclear related research institutes and industries) both by academicians and students , (ii) technical cooperations – teaching by Korean professors , technical support in terms of books and hardware-softwares (including training) and workshops (including human resource development) , (iii) research focused development and (iv) introduction of new nuclear technologies for teaching and applications. Currently (2018) , we are in the third phase which will involve sending Phd students for attachments at critical laboratories in South Korean universities . We show a time-line of some of the technical visits (not all shown) below:

Date	Activities	Remarks
2009	Visit by School of Applied Physics to KAIST and signing of LOI 3 Summer Schools were held at UKM in 2010, 2011 and 2013.	UKM coordinator : Prof. Dr. Shahidan Radiman, Chairman , School of Applied Physics
15 April 2014	First MOU signed between KNA and UKM	UKM contact point : Prof. Dr. Redzuwan Yahaya (Head of the Nuclear Sc Programme)
23-27 June 2014	Technical visits by 5 lecturers from UKM to South Korea	Visit to Hanyang Univ (Seoul campus), KAERI, Doosan Heavy Industries and Constructions and Kori NPP site.
3-7 August 2015	Technical visits by 6 UKM lecturers	Visit to Kyung Hee Univ., KHNP-CRI , KINGS and UNIST.
8-13 Nov 2015	Visit by UKM 18 UKM students	Visit to KINGS, Kori Nuclear Power Plants and SNU

1 -3 Sept 2016	Visit by Vice Chancellor (President) , Dean of Fac. Of Sc and Technology and 1 professor from UKM	Viti to Kyung Hee and Hanyang University , KAERI and KAIST as well as KNA.
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We also show some of the teaching contributions by South Korean professors :

Date	Activities	Subjects
15-19 Sept. 2014	Dr. Myung Jae Song	Radiation Protection ; Radioactive waste management
17-23 Sept. 2015	Dr. Yeong Hwa Lim	Radioactive waste management
May 2016	Dr. Lee Sang Yong	Modeling and simulation of reactor safety analysis
Sept.2016	Dr. Hho Jung Kim	International Regulation for Nuclear Power
April 2017	Dr.Tae Young Kong	Nuclear Safety and Radiation protection
May 2017	Dr. Hee Geun Kim	Nuclear Fuel cycle ; Radioactive waste management ; NPP decommissioning
19-23 March 2018	Dr. Myung Jae Song	-

Books donated to UKM by KNA include : (i)Garcia, M.L. 2012. The Design and Evaluation of Physical Protection Systems: Second Edition (ii)Burlington: Butterworth-HeinemannStacey, W.M. 2007. Nuclear Reactor Physics: Second Edition. Weinheim: Wiley-VCH and 5 other books.

As well as various HRD workshops held by Hanyang University and KNA:

Date (need exact date)	Place	Attended by rep. from
2015	Dalat University	UKM
2016	Chulalongkorn University	UKM, UTM and 1 Malaysian NGO
2017	Universiti Teknologi Malaysia	UKM , UTM
2018	UKM	UKM, MNPC, MNA , Uniten
2019	UGM, Jogjakarta	UKM, UTM

Further cooperations

Starting this year (2018) KNA will sponsor the attachments of 2 Phd students from UKM to Kyung Hee University and KAIST for 2 months and 1 month respectively.

Acknowledgements

We would like to thank Korea Nuclear Association and all South Korean Universities and institutions that were involved in our academic visits , lecture series as well as student attachments and HRD workshop series . These activities had a positive impact in various ways e.g (i) increase in the number of UKM students furthering their studies in South Korea (ii) increased research collaborations and (iii) appreciation of Korean customs , work culture and industrial development (especially in nuclear technology) which will be useful for future technology transfer and trading partners.