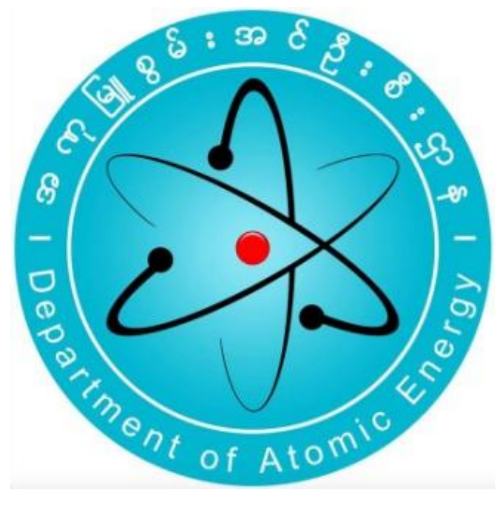




Human Resource Development for the Application of Radioisotope Techniques to Industry in Myanmar

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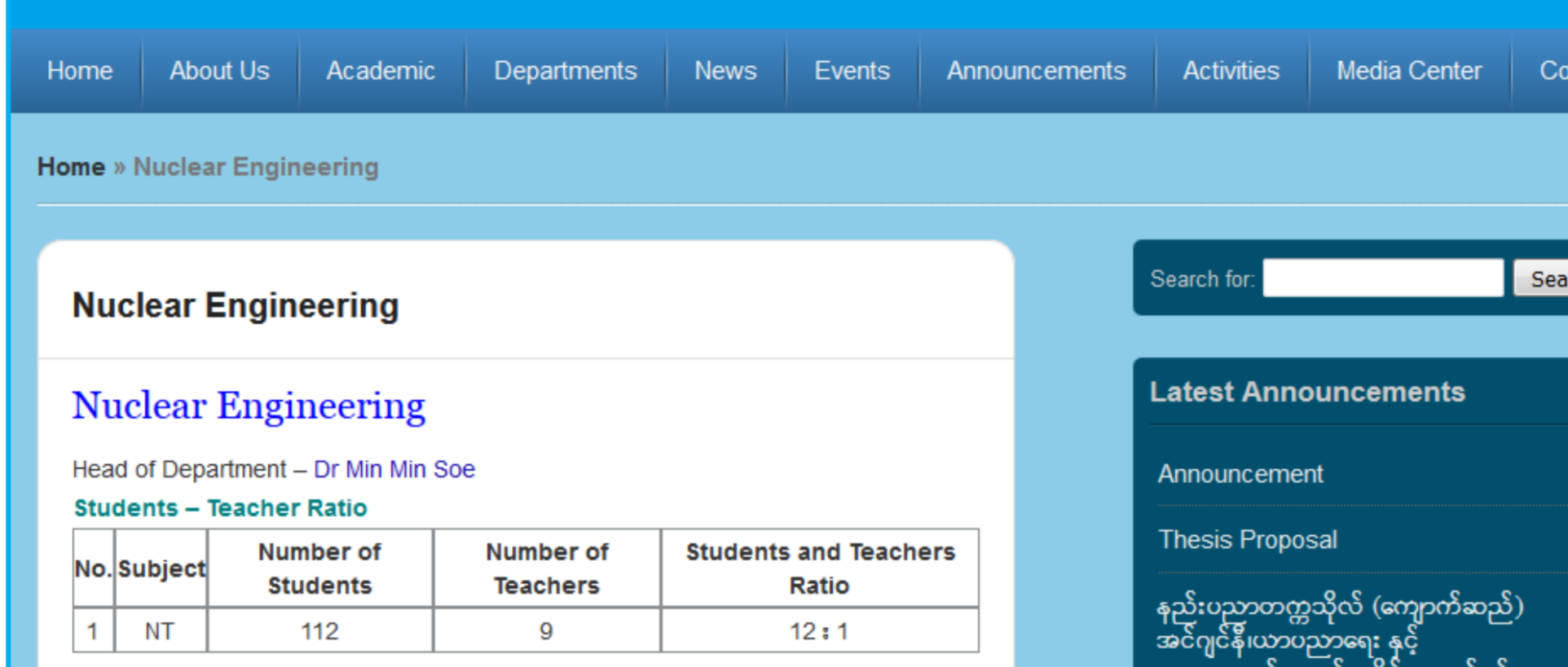
Introduction

Competent and efficient manpower is one of the main sectors for the application of radiation science and technology. The Division of Atomic Energy (DAE) has been conducting E&T and R&D in nuclear application field, cooperating with local institutions and international societies. Two technological universities have been offering the academic programs for nuclear engineering (B.Tech, B.E, M.E and Ph.D) under the supervision of DAE.

Mandalay Technological University



Technological University (Kyaukse)



Nuclear Engineering Programme

- Bachelor of Engineering [B.E (NT)] (six years program)
- Master of Engineering [M.E (NT)] (two years program)
- Doctor of Philosophy [Ph.D (NT)] (three years program)

Teaching and Research Facilities

- Computer Room
- Radiation Detection Laboratory
- Nuclear Instrumentation Laboratory
- Analytical Laboratory
- Radiochemical Laboratory

IAEA TC Project – MYA 1014/1016

To have professional development, skill development and opportunities for career advancement and future job prospects, human resource development program in radioisotope techniques for the application to industry has been being carried out through national TC project cooperating with IAEA since 2012. Radioisotope Techniques Laboratory was established under the Division of Atomic Energy to transfer the technology and implement radioisotope techniques into a practice.



Radioisotope Techniques Laboratory, Division of Atomic Energy



Radioisotope Techniques

Giving information the basic theory of gamma ray transmission, gamma column scanning (CS) and gamma computed tomography (CT) techniques are introduced to the students. The simulation of gamma column scanning is conducted by using model of distillation column made of iron. Two computed tomography systems, GORBIT first generation CT system supported by IAEA and field-used BATAN CT system provided by BATAN Indonesia, are used to practise for field application. To conduct the experiments for radiotracer technique, in-house pipeline system and water flow-rig for simulation of chemical reactor provided by IAEA are applied as useful and compact tools. Experiments on neutron back scattering technique are also conducted in the laboratory.

Lecture on Radioisotope Techniques



Attenuation Experiment



Tracer Experiment



N-Back Scattering



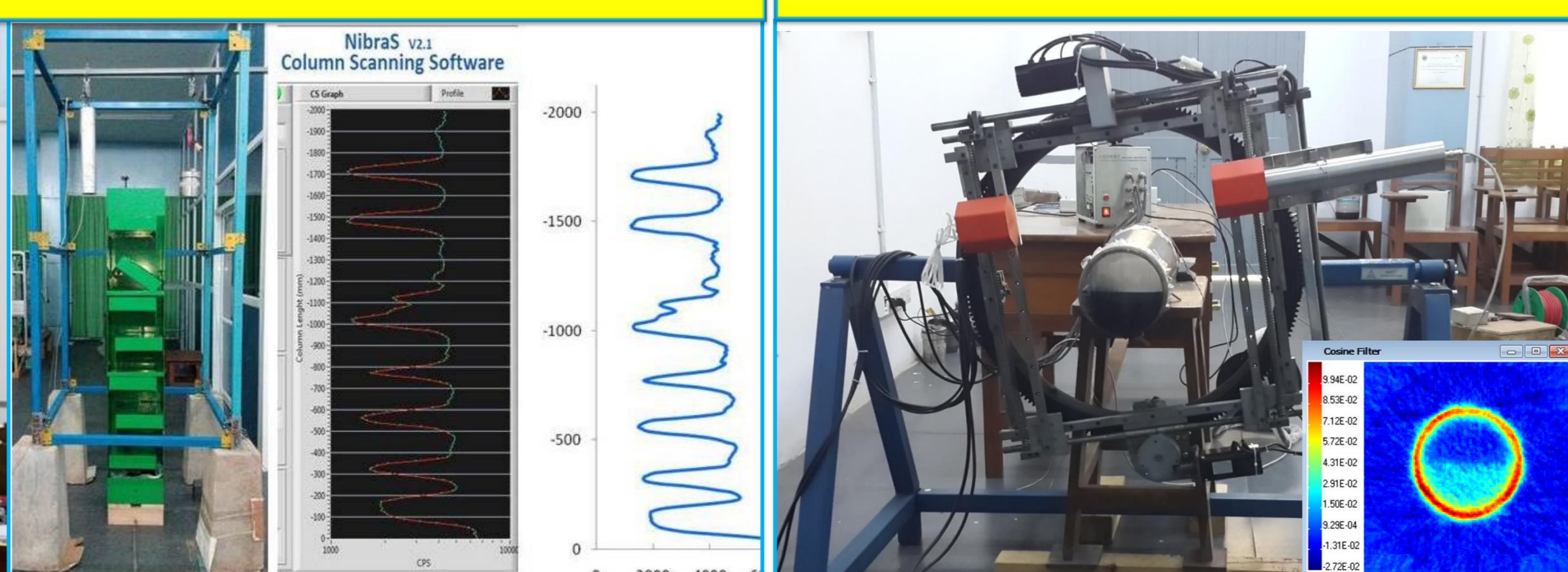
Field Work



Gamma Column Scanning Experiment



CT Experiment



Conclusion

The four techniques have been practised in laboratory and CS in the field. To achieve professional in the nuclear technology for industrial application, some modifications on experimental design will be done and it can also assist to get individuals in learning system more effectively. From the development of industry-driven education and training programs, students are trying to develop the adaptable designs and software needed in the application to local industries.