

Studies in Medical Physics at home



Students at a radiotherapy unit at National Institute of Cancer Research and Hospital (NICRH) in Dhaka

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In the years between 1996 and 2000, the task group “Medical physics in developing countries” of the German Society for Medical Physics (DGMP) arranged five seminars/workshop in Dhaka on medical physics with the physics department of BUET. The seminars were largely attended by physicists working in nuclear physics, solid state physics, radiation protection, nuclear medicine and by physicians from radio-oncology and nuclear medicine. The first impetus to start a Department of Medical Physics and Biomedical Engineering in Bangladesh came from that time.

Dr. Golam Abu Zakaria, Professor of Medical Physics, Gummersbach Hospital of the University of Cologne, Germany and the initiator of the seminars, was trying to open a department in a public university like BUET. But at that time this subject was new in Bangladesh, it could not be possible to open such a department in a public university for different reasons. In 2000, a private University, Gono Bishwabidyalay (University) came forward to accept his proposal of starting a master program (4 semesters) both in medical physics and in biomedical engineering (MPBME). In 2005 our department has also opened BSc (8 semesters) in MPBME. Still now this is the one and only department in Bangladesh offering B.Sc and M.Sc course in MPBME. The University Grant Commission of Bangladesh officially recognizes these courses.

The syllabuses of these courses are based on DGMP, AAPM and IAEA documents, adapted to the need of Bangladesh. The course structure is designed to able the students to work in hospitals, health institutes and research in MPBME. The basic prerequisite for admission to the master course is a graduation degree in one of the following subjects: MPBME, physics, related field in physical science or in bioscience, medicine or engineering disciplines with minimum second class. For admission in B.Sc course the students should have S.S.C and H.S.C (science) with math and physics or Diploma in electrical/ electronics/ mechanical/ electromedical from a Polytechnic Institute with minimum 2nd class or equivalent.

In 2003, a collaboration program was installed between Heidelberg University, Germany and Gono University, Bangladesh. Under this collaboration teachers and students have been exchanged between these two

universities with the financial support of the German Academic Exchange Service (DAAD). The department has also received equipment, educational materials, journals and research material under this project. Some students and teachers do their master or Ph.D thesis in medical physics where the practical parts are also held in foreign universities.

In 2009 a new organisation “Bangladesh Medical Physics Society (BMPS)” is formed. BMPS is engaged in professional, educational and research activities throughout Bangladesh in the field of medical physics including biomedical engineering, especially the application of physics in medical sciences. It represents the interests of Medical Physicists outward and creates education and training possibilities for the scientific rising generation.

Up to 2010, after the establishment of the MPBME department, a good number of students were awarded a M.Sc degree and eight students a B.Sc. degree in MPBME. At present these students are working in the radiotherapy departments of the National Institute of Cancer Research and Hospital (NICRH), of Dhaka Medical College, of different private hospitals (the United Hospital, Square Hospital, Khwaja Yunus Ali Medical College and Hospital, Ahsania Mission Cancer Hospital) or are teaching Medical Physics in Gono University.

The establishment of Medical Physics und Biomedical Engineering Education in Gono Bishwabidyalay (University) is a success story for Bangladesh. We would like to continuously develop strong and advanced Medical Physics and Biomedical Engineering Programs for education and research by incorporating the latest developments of Imaging and Radiotherapy. For the future we would like to establish a further close collaboration with other foreign universities and research institutes. We would be glad to participate in international scientific conferences in order to enhance our potential for a better treatment of the cancer patients in our country.

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