

Report On B Sc IV Sem Students Visit To District Civil Hospital , Dharwad

Date: 05-07-2023

B.Sc IV Sem Students are studying OEC Physics - "Medical Physics" under NEP during AY 2022-23. Under this title, KUD has introduced Physics of Medical Diagnostic Tools : X-Ray, CT Scan, MRI and Ultrasound Imaging techniques, Principle and working and image reading. As a part of activity under this curriculum, B.Sc IV sem OEC- Physics students were taken to Radiology Dept , District Hospital Dharwad on 05-07-2023.

Dr. Priyank, Radiologist District Civil Hospital, Dharwad explained and demonstrated the working of CT scan and ultra sound scan (also color dopler) to students. Dr. Priyank explained to students in so simple and convincing way that every one of them were able to correlate explanation with what they have learnt in their theory classes.

The first diagnostic machine Dr. Priyank took the students was Sonography Instrument. He showed different types of (Both high frequency and low frequency) transducer/probes used for scanning purpose. Penetrating ability of ultrasound waves by Probes with high frequency and with low frequency were demonstrated by Dr.Priyank beautifully by taking it on his hand. He explained application of gell and showed its importance in matching acoustic impedance for penetration of ultrasound waves. Then he demonstrated Application of USG scanning in case of of a pregnant lady live for students. In this live demonstration, movement of the unborn baby inside womb was demonstrated. He showed colour Doppler image for blood flow towards and away from probe. Heart beating of fetus (FHR) was also demonstrated. Students were very much excited to see this live demonstration.

Further students were taken to CT scan machine. He explained different parts and working of every part of the machine. He showed gantry and how source and detectors are rotated. He explained about slicing and how 3D image is reconstructed with the help of computer (Computed Tomography).

Radiologist tried to convince students about the Power of CT image by showing how minute details of internal organs are captured in CT imaging and how doctors use this information to perform operations on patients and save lives.

Dr.Priyank, took the example of brain image and explained Grey scale and Hounsfield Units(HU). Using HU units, he explained how bone is differentiated from soft tissue and tissues and blood Capillaries.

Then Dr.Priyank continued taking the students to conventional X-ray machine colidge tube, and explained the working of X-ray machine. He explained how technology has changed from conventional method exposing photographic film and developing film to latest digital imaging method and how quickly image is captured in computer. He showed dark room where conventional x- Ray films are developed. Students were excited to see all these. Students curiously asked their doubts and got answers for all their questions. Overall interaction with doctor was very good. This initiative by Dept of Physics, KSCD was very much appreciated by Distirict Surgeon and staff of Distict Civil Hospital , Dharwad. Dr Priyank has suggested to take these students to DIMHANS to see MRI machine and its working. M.R.Ranganath, HOD Of Physics, KSCD was also present during this visit.





