



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

An Autonomous Institution Affiliated to Bharathiar University

Re - Accredited by NAAC with 'A' Grade

COIMBATORE - 641 048



News Letter

2016 - 2017

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Department of Medical Physics



Objective

“Visualizing solutions for accurate diagnosis and treatment”

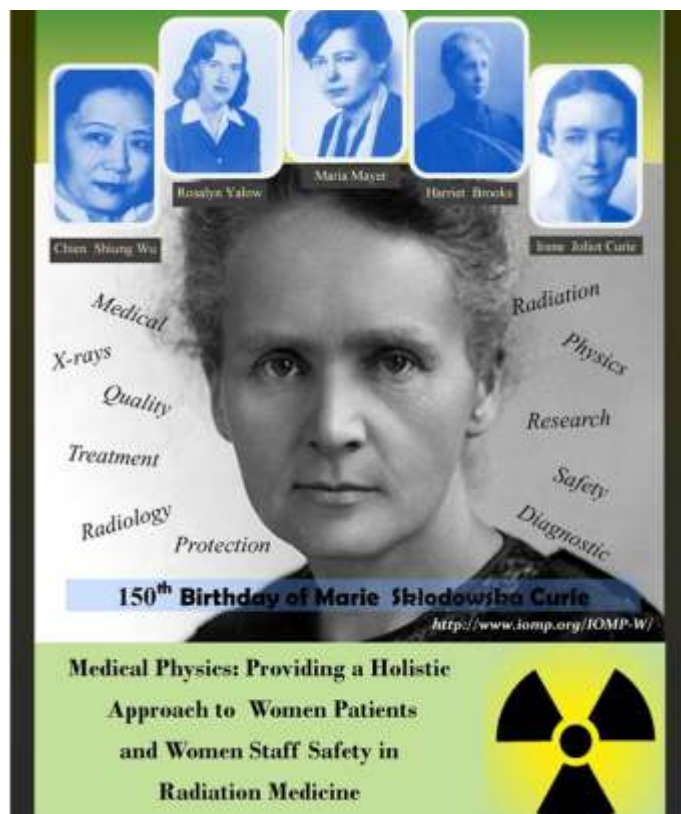
The Department was established during the year of 2012. This is a basic science department in Dr.N.G.P Arts and Science College. The faculty provides comprehensive graduate education in medical physics, and the research strives to improve health by developing and implementing radiation treatment for cancer.

Vision

"To offer diverse Medical Physics programme to establish and maintain the standards of the students of Medical Physics in the disciplines of Diagnostic Imaging, Radiation Oncology and Nuclear Medicine.

Mission

The goal of the Department is to cultivate an educational environment which provides the full spectrum of learning opportunities in clinical medical physics, radiation oncology and radiobiology. The curriculum is flexible and designed to enable a student to optimize their learning experience throughout their two years programme. It is an expectation that upon the completion of the programme a student will be an outstanding “Radiation Oncology Physicist” capable of making an



TEACHING FORMAT

Teaching is carried out through didactic lectures, clinics and numerous teaching conferences, with emphasis on patient care, under the supervision of full-time staff. The department enjoys state-of-the-art equipment and operates several sites both on and off-campus, which include a main facility in the KOVAI MEDICAL CENTER AND HOSPITAL (KMCH)



Attending conference is essential to the success of teaching program that the students attend all Medical Physics conferences. Students are expected to present for the physics related procedures and the assigned projects to the group. Handouts (paper or electronic) are mandatory for preparing for the presentations. A few highlights from the Department of Medical Physics teaching format include the following,

- » Clinical Talks (Topic-based)
- » Physics/Radiobiology Talks
- » Case Presentations - focused on background/workup
- » Journal Club
- » Guest attending lectures
- » Visiting professors
- » Training and project to other cancer centers

Training components given by department at KMCH



Linear Accelerator - Rapid Arc



Brachytherapy - GammaMed



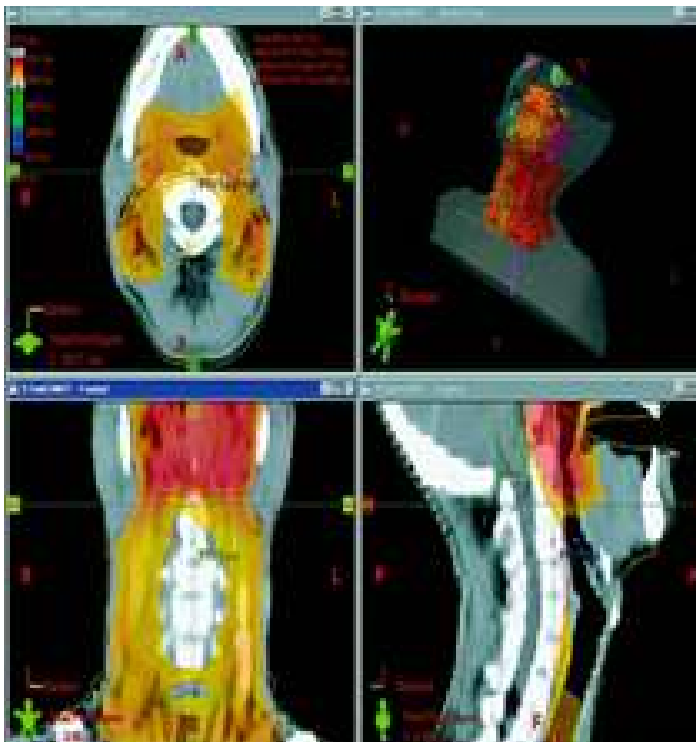
Diagnostic Radiology



Computed Tomography - Siemens



Nuclear Medicine



Treatment Planning System - Eclipse



Guest Lecture in the topic of Radiation detectors and Instrumentation on 03.02.2017 at KMCH Tumor Board



Guest lecturer in the topic of Neutron Dosimetry on 13.02.17 to 14.02.17 at KMCH Tumor Board.



Guest lecturer in the topic of Physics of Brachytherapy on 13.03.17 to 14.03.17 at KMCH Tumor Board.

LIST OF GUEST LECTURES

DATE	TOPIC	GUEST
02.09.2016 To 03.09.2016	RADIATION BIOLOGY	Dr. Jeevanram Former Scientific Officer Atomic Energy Regulatory Board Kalpakkam
03.02.2017	RADIATION DETECTORS AND INSTRUMENTATION	Mr. Venkatesan Senior Manager PTW Pvt Ltd Chennai.
13.02.2017 To 14.02.2017	NEUTRON DOSIMETRY	Dr. Jeevanram Former Scientific Officer Atomic Energy Regulatory Board Kalpakkam
04.03.2017	DEMO CLASS IN RAPID ARC- LINAC	Mr. K. Arusamy All india technical support Head- Service Varian Medical System
13.03.2017 To 14.03.2017	PHYSICS OF BRACHYTHERAPY	Mr. Muthukumar Senior Medical Physicist Department of Radiation Oncology Apollo Hospital Chennai
31.03.2017	SAFETY IN MEDICAL USES OF RADIATION	Dr. Jeevanram Former Scientific Officer Atomic Energy Regulatory Board Kalpakkam.

ACHIVEMENTS OF STUDENTS

I & II M.Sc Medical Physics students participated in the 37th AMPICON 2016 on 18th to 20th Nov 2016 in the topic of "Innovative Techniques of Medical Physics both in modern diagnostic and Therapeutic application for improved cancer care" conducted by Krishna Institute of Medical Science, Hyderabad.

M.Sc., Medical Physics Students Ms.Bhuvaneswari.V and Mr. Muhammed Ashik won second prize in quiz competition conducted by Krishna Institute of Medical Science, Hyderabad.



M.Sc Medical Physics students participated in the 37th AMPICON 2016 conducted by Krishna Institute of Medical Science, Hyderabad.

M.Sc., Medical physics students participated in Quiz Competition conducted by Krishna Institute of Medical Science, Hyderabad.



STAFF PARTICIPATION

Mrs.Jayanthi.S, has participated in the 37th AMPICON 2016 on 18th to 20th Nov 2016 in the topic of "Innovative Techniques of Medical Physics both in modern diagnostic and Therapeutic application for improved cancer care "conducted by Krishna Institute of Medical Science, Hyderabad



CLINICAL TRAINING UNDERGONE BY THE STUDENTS

II M.Sc Students underwent one month (May2015- June 2015) training programme and one month project programme (January 2016- February 2016) to familiarize themselves about the Radiotherapy department to various cancer centers all over India. The facilities in which students training and project include, but are not limited to the following:

- » Intensity Modulated Radiation Therapy (IMRT)
- » Intensity Modulated Arc Therapy (IMAT; Rapid Arc)
- » Image Guided Radiation Therapy (IGRT - CBCT, kV, others)
- » Stereotactic Body Radiation Therapy (SBRT)
- » Gamma Knife Treatment
- » Respiratory Gated Radiation Therapy
- » PET-CT or MRI-CT fusion for target delineation
- » Remote afterloading HDR brachytherapy.



Training at KMCH



Training at Omega Cancer Hospital - Hyderabad



Training at Fortis Hospital- Mohali

CHILD CANCER EARLY WARNING SIGNS

Continued, unexplained weight loss

Headaches, often with early morning vomiting

Iincreased pain in bones, joints, back or legs

Lumps or unexplained masses

Development of excessive bruising, bleeding or rash

Constant infections

Awhitish colour behind the pupils

Nausea which persists or vomiting without nausea

Constant tiredness or noticeable paleness

Eye or vision changes which occur suddenly

Recurrent or persistent fevers of unknown origin

EARLY DIAGNOSIS WILL SAVE LIVES



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