INSTITUTE OF DENTAL SCIENCES

(Recognised by Dental Council of India
& Ministry of Health & Family Welfare, New Delhi)
Constituent Unit of Malwanchal University, Indore

Ref.No.:IIDS/ Misc.VAC /2024/ 59-B

Date: .26.06.2024

CIRCULAR

Index Institute of Dental Sciences, Indore is organizing a value added course entitled **"CBCT-A NEW FACE OF DENTISTRY "** to provide in-depth knowledge & application of Cone Beam Computed Tomography (CBCT), a revolutionary technology in the field of dentistry. Interested students and interns can attend the session and gain insights for the same. The value added course will be held from 29/06/2024- 01/07/2024, at Auditorium IIDS.

Details are as per the brochure attached.

Index Institute of Dental Sciences, Indore
DEAN

S. Ganguly

Dean
Index Institute of Dental Sciences,
Indore

Registrar
Malwanchal University
Indore (M.P.)

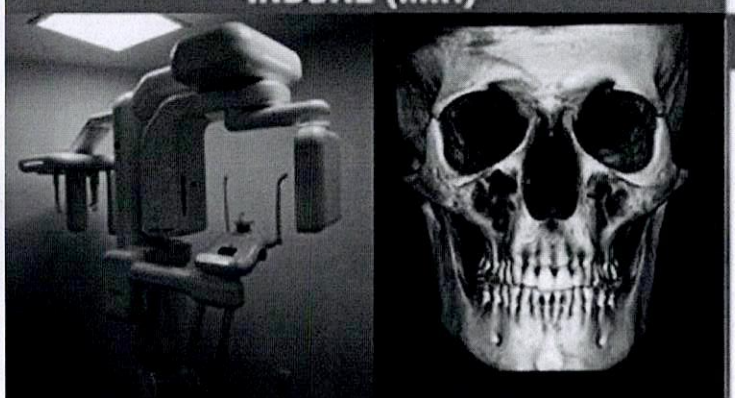
Copy for information to:

- Registrar (Malwanchal University, Indore)
- All concerned authorities
- File

Prepared By: Dr. Anu Vashisht

MALWANCHAL UNIVERSITY

IQAC, MALWANCHAL UNIVERSITY & INDEX INSTITUTE OF DENTAL SCIENCES INDORE (M.P.)



"CBCT: A NEW FACE OF DENTISTRY."

ABOUT

The Course trains students and professionals in 3D imaging techniques, enabling enhanced diagnostic accuracy, treatment planning, and surgical precision for procedures like implant placement, endodontics, orthodontics, and complex anatomy evaluation.

COURSE OBJECTIVE

- Understand CBCT Fundamentals
- Explore CBCT Applications
- Enhance Treatment Planning
- Ensure Patient Safety

MODULES

Basics of CBCT and its evolution from traditional CT
Differences between CT and CBCT Basic principles of X-ray generation and detection
Overview of equipment and software used in CBCT

RESOURCE PERSONS

Dr. Gaurav Pratap Singh
29th June – 1st July 2024
Venue – Index Institute Of Dental Science, Indore
Timing – 9:30 am onwards
Registration Free

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Index Institute of Dental Sciences, Indore
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REGISTRATION CONTACT

Dr. Anu Vashisht 9561910483
Department Of Conservative Dentistry And Endodontics
Mr. Shivam Sharma 91952770393
student section , Malwanchal University

PROGRAM OUTCOMES

- Comprehensive Knowledge of CBCT Technology
- Proficiency in CBCT Image Acquisition
- Application of CBCT in Specialized Fields
- Knowledge of Radiation Safety and Dose Optimization
- Awareness of Advanced CBCT Technologies and Research Trends

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Value Added Course - CBCT: A New Face of Dentistry

REPORT

Date- 29/06/24- 01/07/24

Venue- **IIDS** Auditorium

Course Code: **IIDS/VAC/2024/12**

Number of attendees: 75

Index Institute of Dental Sciences (IIDS), Indore, organized a comprehensive 3-day value-added course titled "CBCT: A New Face of Dentistry" from June 29 to July 1, 2024. This workshop aimed to introduce undergraduate and postgraduate students, interns, and faculty to Cone Beam Computed Tomography (CBCT), an advanced imaging technology that was transforming dental diagnostics and treatment planning. The program was a resounding success, with notable sessions led by esteemed expert Dr. Gaurav Pratap Singh, M.D.S., who delivered insightful lectures and facilitated hands-on training sessions.

The value-added course was scheduled for 16 hours from June 29 to July 2, 2024. These modules were discussed during the free hours of the students. Registration was free for all students. The total duration of the course was 16 hours.

The resource person was Dr. Gaurav Pratap Singh. Different modules were covered in detail with simultaneous student interaction. The modules discussed included:

- Basics of CBCT and its evolution from traditional CT
- Differences between CT and CBCT imaging
- Basic principles of X-ray generation and detection
- Overview of equipment and software used in CBCT
- Physics and Principles of CBCT Imaging
- Principles of radiographic imaging
- X-ray physics: interactions, attenuation, and scatter
- The 3D reconstruction process
- Dose considerations and patient safety in CBCT
- Anatomy and CBCT Interpretation
- Overview of anatomical structures visible on CBCT scans

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- Reading and interpreting CBCT images in various anatomical planes
- Recognizing normal vs. abnormal findings
- Introduction to pathology and anomalies as seen in CBCT
- Application of CBCT in dental implant planning
- Endodontic evaluation and diagnosis
- CBCT for orthodontic treatment planning
- Assessing bone density and quality in oral and maxillofacial regions

Course Objectives

The course was designed with the following objectives:

1. To provide participants with a thorough understanding of CBCT technology and its significance in dentistry.
2. To demonstrate CBCT's practical applications across various dental specialties, including endodontics, orthodontics, implantology, oral surgery, and periodontics.
3. To enhance diagnostic and treatment planning skills in dental practitioners.
4. To educate participants on radiation safety protocols and ethical considerations in CBCT use.

Day 1: Introduction to CBCT Technology and Technical Aspects

Session Highlights:

- **Introduction to CBCT Technology:** Dr. Gaurav Pratap Singh began the course with an engaging presentation on the fundamentals of CBCT technology, its historical development, and its advantages over traditional 2D imaging.

Topics Covered:

  - Comparison between CBCT and conventional 2D imaging methods.
  - Advantages of CBCT in improving diagnostic accuracy and treatment outcomes.
  - Overview of CBCT machine components and functions.

- **Technical Aspects of CBCT:** This session detailed the technical components of CBCT machines, including the X-ray source, detector, and software, explaining how these elements worked together to produce 3D images.

Topics Covered:

  - Principles of CBCT image acquisition and reconstruction.
  - Detailed exploration of software tools for CBCT image analysis.
  - Practical demonstration of CBCT technology's potential in enhancing precision in dental imaging.

Interactive Q&A Session: Dr. Singh addressed questions from participants, which included undergraduates, interns, postgraduate students, and faculty members, to solidify their understanding of CBCT fundamentals.

Day 2: Clinical Applications of CBCT

Session Highlights:

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- **Clinical Applications of CBCT in Dental Specialties:** The second day of the course delved into the specialized applications of CBCT across multiple dental fields.
    - **Endodontics:** Using CBCT to visualize detailed root canal anatomy and identify periapical lesions.
    - **Orthodontics:** Applications of CBCT in assessing skeletal structures, airway analysis, and orthodontic treatment planning.
    - **Implantology:** How CBCT aided in pre-surgical planning and post-surgical evaluation for dental implants.
    - **Oral Surgery:** CBCT's role in assessing impacted teeth, jaw pathology, and trauma cases.
    - **Periodontics:** Use of CBCT for evaluating periodontal bone loss and furcation involvement.
- **Case Study Presentations:** Dr. Singh and his team presented real-life case studies demonstrating how CBCT imaging was used to guide accurate diagnoses and effective treatment plans. Participants reviewed various images and were encouraged to engage in collaborative discussions to interpret findings.

Day 3: Hands-on Training, Case Studies, and Radiation Safety

Session Highlights:

- **Hands-On Practical Sessions:** Day three included hands-on training where participants operated CBCT machines under expert guidance.

Topics Covered:

- Patient positioning and preparation for optimal CBCT imaging.
- Image acquisition and interpretation techniques.
- Participants had the opportunity to interpret CBCT images and discuss them with experts.

- **Radiation Safety and Ethical Considerations:** This session covered essential safety protocols and ethical practices for using CBCT technology.

Topics Covered:

- Principles of radiation safety to minimize patient and staff exposure.
- Best practices for reducing radiation doses without compromising image quality.
- Ethical considerations, including patient consent, data security, and responsible use of advanced imaging technologies.

Closing Ceremony: The course concluded with an appreciation ceremony acknowledging the efforts of Dr. Gaurav Pratap Singh, the organizing team, and all participants. Certificates were awarded to participants, marking their successful completion of the course.

Course Outcome

The course achieved its primary objectives and received positive feedback from participants. Attendees gained:

- A comprehensive understanding of CBCT technology and its application in clinical practice.
- Hands-on experience with CBCT machines, enhancing their diagnostic and treatment planning skills.
- Knowledge of safety protocols to ensure responsible use of CBCT in dentistry.

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Dr. Gaurav Pratap Singh was felicitated by Dr. Suparna G Saha.

Conclusion

The "CBCT: A New Face of Dentistry" course was a valuable initiative by Index Institute of Dental Sciences, bridging theoretical knowledge with practical skills in CBCT technology. The overwhelmingly positive response from students, interns, postgraduates, and faculty underscored the importance of continued education in advanced dental imaging techniques. By positioning participants at the forefront of modern dental diagnostics, this workshop set a foundation for future advancements in dental imaging and patient care.

The course was a significant step towards enhancing the technological competence of dental practitioners. It successfully imparted essential skills and knowledge, positioning participants at the forefront of modern dental diagnostics and treatment. The overwhelmingly positive feedback indicated a strong interest and need for continued education in this area, paving the way for future courses and workshops.

Acknowledgment

We extended our gratitude to all participants, organizers, and speakers for their valuable contributions to making this program a success. The lecture was highly appreciated by students and teaching faculty. Overall, the course was deemed successful in achieving its objectives and received positive feedback from attendees for its informative sessions and practical demonstrations.

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Attendees-

TANISHA HALDKAR
TANISHK RAGHUVANSHI
VANSHIKA YADAV
VIKAS ANJANA
YASHASVI KUNWAR TOMAR
YASHASWI KOTHARI
YASHRAJ PATEL
ZAHABIYA
ZAINAB

MISHBAH MAKRANI
MUSKAN SILAWAT
MUSKAN WASKLE
NIHAL MUDGAL
NITESH KUMAR SAHU
PALAK SHARMA
PAYAL CHOUKSE
PIYUSH SHARMA
POOJA PRAJAPAT
POONAM GUPTA
PRACHI DONGRE
PREETI CHAURASIA
PREETI RAJPUT
RISHIKA CHHABRA
RITIK SIKDAR
RIZWAN ALI
RUMANA SYED
SALUNKE HINDAVI PRAKASH
SAMIKSHA UIKEY
SANDIP GUNWAN
SHAIKH ALISHA
SHINDE SUMEDHA NARAYAN
SHRUTI GANGRADE
SIYA PATEL
SWETA KUMARI
TANISHKA SONI
TANIYA SIRODIA
VANSHIKA PATIDAR
VANSHITA GUPTA
VIDYUT PARMAR
VIJETA PATIL
YASHI SHARMA

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AARTI GOURE
AASHISH KUMAR
ADITI YADAV
ADITYA PRADHAN
ADITYA YADAV
AISHNA KANOJIYA
AKANKSHA VERMA
ANUBHAV BHARTI
ANUSHKA SONI
AYUSHI CHOUHAN
BADGUJAR HIMANSHU VISHWASRAO
CHITREKHA
DHARMENDRA BHANBAR
FATEMA UJJAINWALA
GOUTAM RATHORE
GURNEET KAUR KHANUJA
HARISH YADAV
HIMANSHI PATEL
HIMIKA PATEL
JEEWAN KUMAR
JYOTI WASKEL
KOMAL YADAV
KOSHIKA PATIDAR
LABHANSHI JAIN
LOKESH SINGH RAJPUT
LUCKY MALVIYA
MAHENDRA SINGH PANWAR
MALAIKA ZAREEN QURESHI
MANISHA KUKREJA
MARIYA LOKHANDWALA
MEGHA PRAJAPATI
MEGHA SONI

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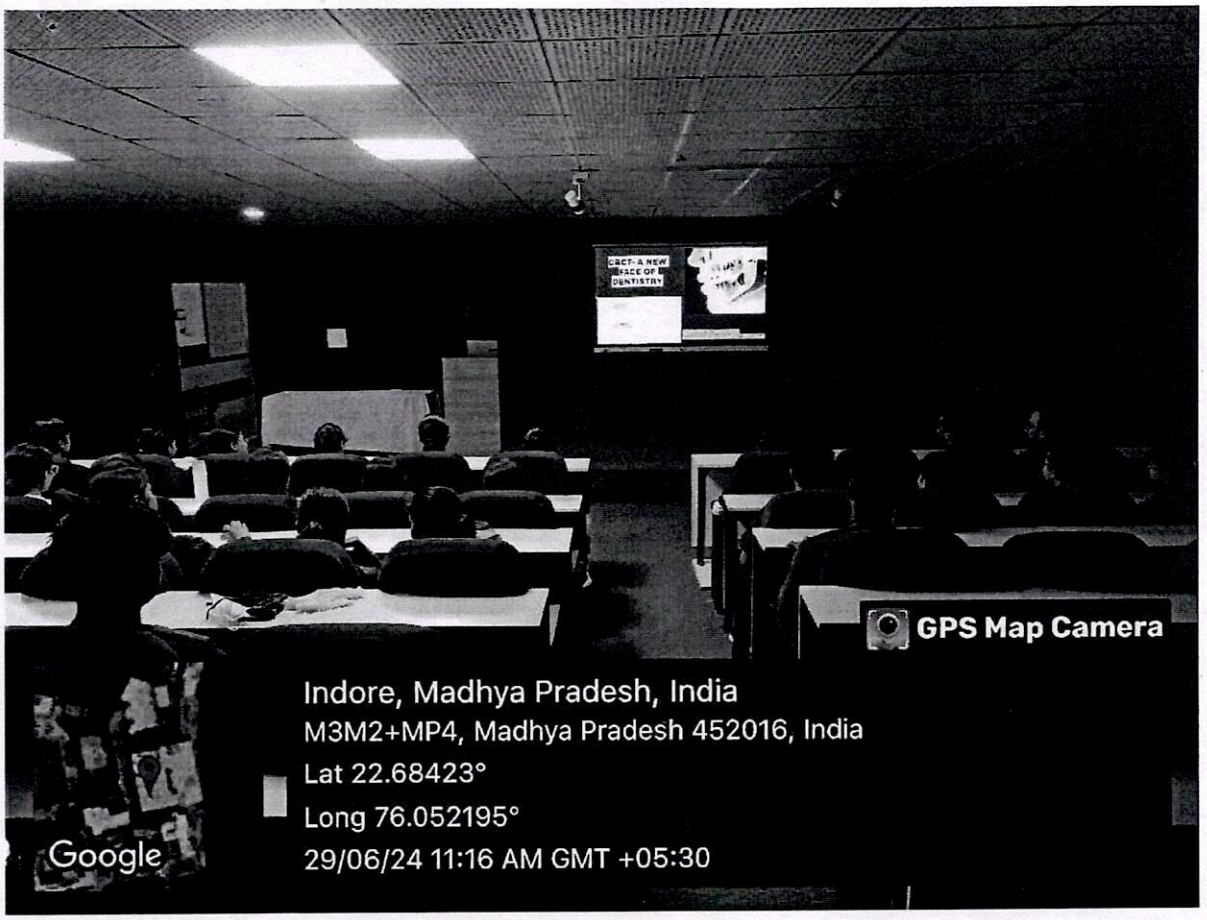

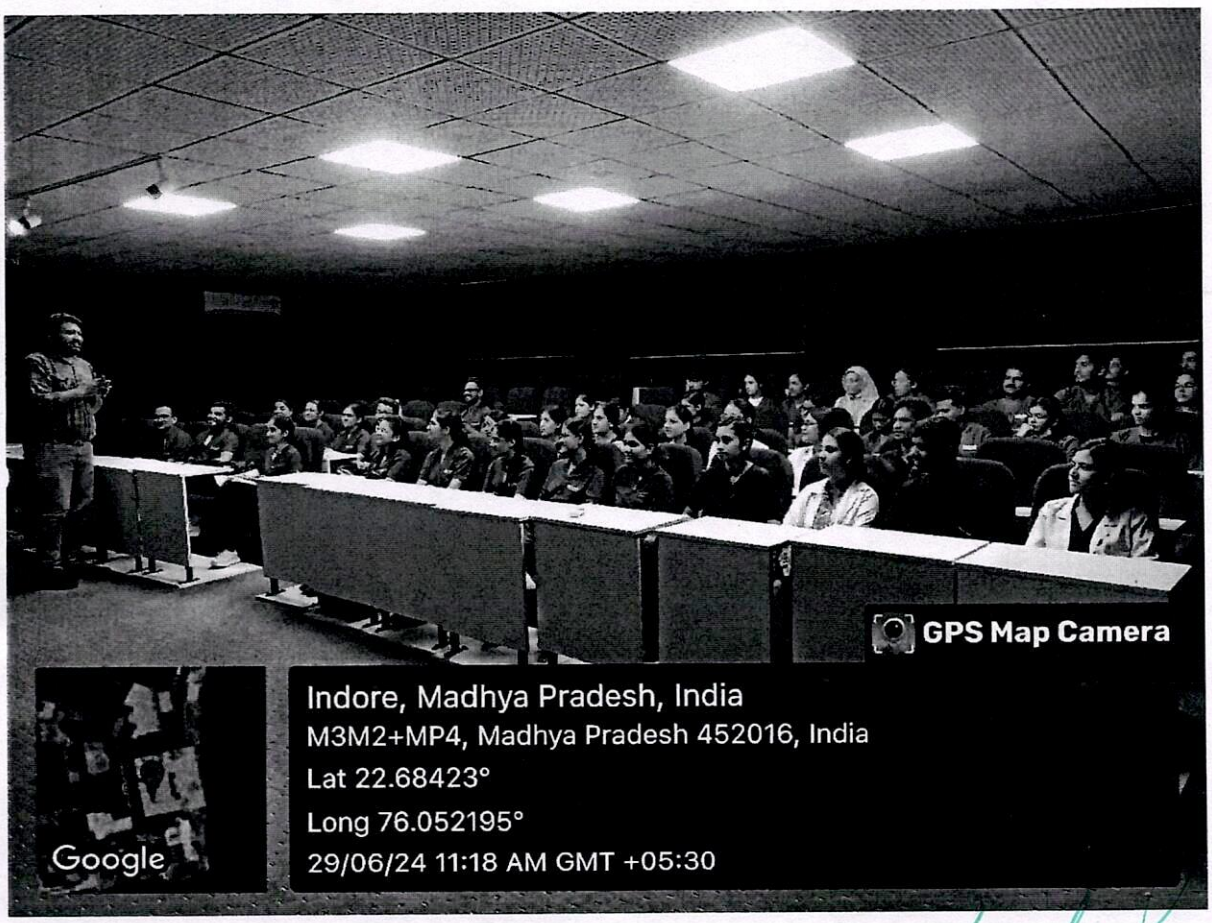

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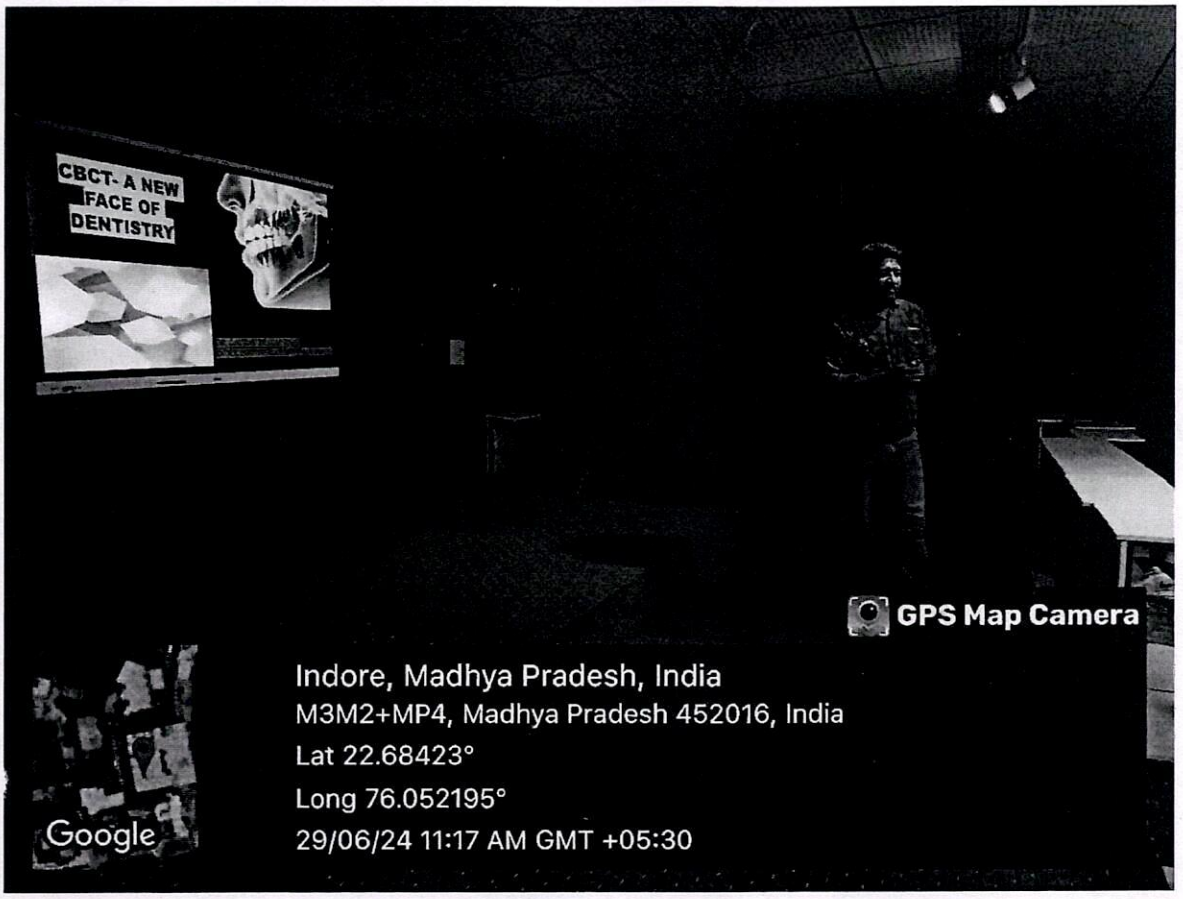

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