



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

Sector-01, Kamothe, Navi Mumbai - 410 209

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Value Added Course

3D GAIT ANALYSIS



Value Added Course

3D Gait analysis

Venue: MGM Centre of Human Movement Science

MGM Super Specialty Hospital,

Sector 30A, Plot 46, Vashi, Navi Mumbai



Objectives

- ✓ Basics of Gait analysis- 2D & 3D
- ✓ 3D gait analysis in neuro-musculoskeletal conditions
- ✓ Hands-on practice of 2D analysis.
- ✓ Live Demonstration of 3D gait analysis
- ✓ 3D gait analysis of common pathological gaits

Attendees:

- ✓ Interns, Bachelor of physiotherapy students, Masters of Physiotherapy scholars & clinicians

Learning Outcomes:

- ✓ Enhanced understanding of scope of 3D Gait analysis in clinical decision making
- ✓ Demonstrate practical application of methods used for 2D and 3D motion capture

Resource Persons: Dr Rajani Mullerpatan, Professor-Director; Dr Bela Agarwal (PT), Associate Professor – Principal, Dr Triveni Shetty (PT) and Dr Juhi Bharnuke (PT) Assistant Professor, MGM School of Physiotherapy, MGM Institute of Health Sciences, Navi Mumbai.



Scientific Programme

31st December 2019	
Timings	Sessions
8.30 – 9.00 am	Introduction & Pre- workshop evaluation
9.00 – 10.15 am	Introduction to Gait- Basics of Gait Kinematics & Kinetics
10.15 - 10.30 am	Break
10.30 - 11.00 am	Introduction to 3 D Gait Analysis – Kinematics and kinetics
11.00 am- 12.30 pm	Demonstration of 3 D : Data Capture
12.30 - 13.00 pm	Lunch
13.00 - 14.00 pm	Introduction to 2 D Gait Analysis - Advances, Uses & Implication, Do's and Dont's
14.00- 15.00 pm	2D Gait: Capture to Analysis
15.00- 17.00 pm	Practice session for 2D gait capture
17.00 - 17.30 pm	Interaction & Feedback
1st January 2020	
9.00 - 13.00 am	Practice Session for 3D Gait Capture
	3D Gait Analysis Reporting and Video Analysis of Gait in knee osteoarthritis
13.00 -13.30 pm	Lunch
13.30 - 14.30 pm	Video Analysis of Crouch Gait in cerebral palsy
14.30-15.00 pm	Video Analysis of Hemiplegic Gait
15.00- 16.00 pm	Interaction & Feedback
17.00 - 17.30 pm	Post evaluation

* Participants will have to carry their own laptop and will be guided for pre download of 2 D gait analysis software.



MGM Centre of Human Movement Science
MGM School of Physiotherapy
MGM Institute of Health Sciences, Navi Mumbai



Title	Value Added Course - 3D Gait Analysis
Department	MGM Centre of Human Movement Sciences, MGM School of Physiotherapy, MGM Institute of Health Sciences, Navi Mumbai
Venue	MGM Centre of Human Movement Science MGM Super Specialty Hospital, Sector 30A, Plot 46, Vashi, Navi Mumbai
Course objectives	<ul style="list-style-type: none">• Basics of Gait analysis- 2D & 3D• 3D gait analysis in neuro-musculoskeletal conditions• Hands-on practice of 2D analysis.• Live Demonstration of 3D gait analysis• 3D gait analysis of common pathological gaits
Course outline/content	<ul style="list-style-type: none">• Introduction to Gait- Basics of Gait Kinematics & Kinetics• Introduction to 2 D Gait Analysis - Advances, Uses & Implication, Do's and Dont's• 2D Gait: Capture to Analysis• Introduction to 3 D Gait Analysis – Kinematics and kinetics• Demonstration of 3 D : Data Capture• 3D Gait Analysis Reporting and Video Analysis of Gait in knee osteoarthritis• Practice session for 2D gait capture• Practice Session for 3D Gait Capture• Video Analysis of Crouch Gait in cerebral palsy• Video Analysis of Hemiplegic Gait
Course Instructor	<ul style="list-style-type: none">• Dr Rajani Mullerpatan, Professor-Director,• Dr Bela Agarwal (PT), Associate Professor – Principal• Dr Triveni Shetty (PT), Assistant Professor• Dr Juhi Bharnuke (PT), Assistant Professor
Duration of the course	2 Days - 16 Hours
Course evaluation	Practical skills assessed
Course feedback	Yes



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Number of students who completed the course	10
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Sector-1, Kamothe, Navi Mumbai – 410209

Course in 3 D Gait Analysis

Preamble:

- A one-day course on gait analysis was organised by MGM Centre of Human Movement Science, MGM School of Physiotherapy, MGM Institute of Health Sciences, Navi Mumbai. This course was designed for understanding basic methodology of 2-D and 3-D gait analysis for Physiotherapy student and clinicians.
- Attendees: 10 Interns
- Location: MGM Centre of Human Movement Science, Navi Mumbai
- Date & time: 31/12/2019 and 01/01/2020; 8.30 a.m. – 4.00 p.m.

Summary:

- Following registration and breakfast, a brief introduction about the MGM Centre of Human Movement Science was presented to participants.
- Information on background and concept of Gait Analysis was provided with emphasis on application of Gait Analysis in routine clinical set-up.
- Session started with introduction to gait focusing on phases of gait, Kinetics, Kinematics and temporal-spatial gait parameters.
- Participants were briefed with various methods for capturing gait from observational gait analysis to 2-D and 3-D analysis.
- After a theoretical session on various software's available for 2- D analysis, a practical demonstration for recording video and analysing it using Kineovea (2-D gait analysis software) was conducted.
- Following a short lunch break, introduction to 3-D motion analysis was presented. A brief overview of Vicon 3-D motion analysis using AMTI force plate was preceded by live demonstration of gait capture using 3-D motion analysis system on healthy participants.



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- Interpretation of graphical reports generated from 3-D system was discussed with examples from pathological gait of patients with knee osteoarthritis, Cerebral palsy and above knee Amputation.
- Feedback was sought from all participants on a structured questionnaire.



Fig 3: Course in 3 D Gait analysis

Singh
Course Coordinator





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Sector-1, Kamothe, Navi Mumbai – 410209

Date: 31/12/19

Casual batch Interns Attendance sheet

Gait Analysis workshop

Roll no	Name	Signature
1	Shreeya Chinchwalkar	Shreeya
2	Rutali Thakur	Rutali
3	Pranita Mahindre	Pranita
4	Saloni Doshi	A
5	Srushti Nahar	Srushti
6	Preksha Kori	Preksha
7	Mayanka Pande	Mayanka
8	Bharti Raja	Bharti
9	Nehali Chaulkar	Nehali
10	Dharmin Vora	Dharmin
11	Dhruvi Patel	Dhruvi

Name & Signature of faculty	Dr. Jubi (PT)	Jubi
Name & Signature of Class Representative	Preksha Kori	Preksha
Signature of Co-ordinator	Dr. Rucha	Rucha
No. of Student absent	:	01.
Remark	:	

