भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Technology Guwahati

QIP Short Term Course & TEQIP III program

Gait and Motion Analysis

March 17th – March 18th, 2020

Conducted by :
Mechanical Engineering Department

Organized by :
Knowledge Incubation for TEQIP
Centre for Educational Technology
URL: http://www.iitg.ac.in/cet

ABOUT THE COURSE

The objective of workshop is to provide state-of-the-art knowledge and hands-on-experience with modern research facilities in gait and motion analysis. This course would focus on the role of engineers, researchers, physiotherapist, prosthetist, occupational therapist, orthopedic surgeon, and PMR specialist to collect and interpret the data to suggest a best solution in the form of biomedical devices or treatment to address the clinical problems. Understanding the distinct requirements of the medical field coupled with a basic knowledge of engineering is essential to address the clinical problems and to develop devices for specific requirement.

Markers are placed on the subjects to monitor their muscle activities and track motion of the body segments. The foot pressure mapping will be helpful to understand weight transferring patterns in lower limb. By evaluating the gait and motion data, we can identify the abnormalities, which help to formulate the interventions required and optimize the assistive devices which help the individuals to become independent and utilize their remaining potential fully.
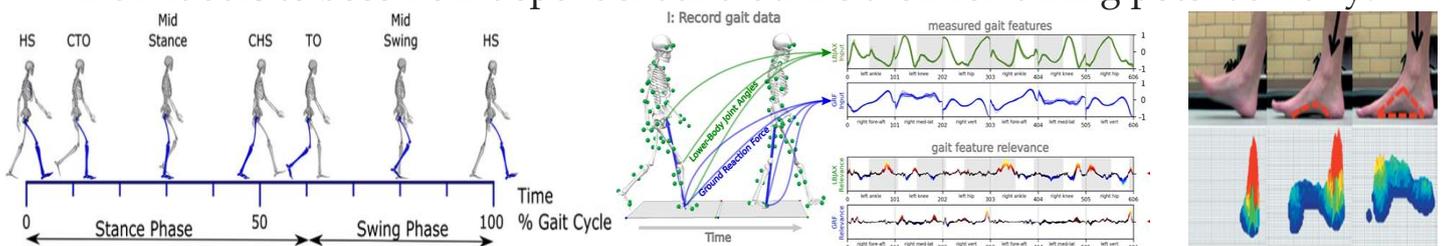
Topics to be covered

- An introduction
- A Practical Guide
- Characteristics of Gait
- Temporal Parameters
- Kinematics of human joint
- Kinetics of human body

- Muscle activity
- Foot pressure
- Metabolic expenditure studies
- Yoga posture studies
- Applications and future
- Case studies

COURSE CONTENTS

- Introduction
- A practical guide to Gait analysis
- Characteristics of Gait
- Temporal parameters
- Kinematics of human joint
- Muscle activity
- Metabolic expenditure
- Application and future scope
- Case studies

ELIGIBILITY

The course is open to Faculty members from all Engineering colleges including TEQIP mapped Institutes. No course fee is charged for participants. TA & DA for the eligible participants will be reimbursed from their respective institutions. However, Rs. 2000/- caution-money has to be sent by the provisionally selected participants, which will be refunded on participation of the program. Participants from other Government Organizations and Industries are also welcome to attend the course with a fee of Rs. 2500/- and Rs. 5000/- (per person excluding food & boarding) respectively and no TA and DA will be provided.

BOARDING AND LODGING

Boarding and lodging facilities will be provided for the selected participants in the student's hostels (based on availability) of the institute.

IMPORTANT DATES

The last date for the receipt of duly sponsored application:

By email: scanned copy: 06/03/2020
Hard copy along with refundable fee must reach by: 13/03/2020
Intimation of selection: 07/03/2020

SELECTION CRITERIA

Number of seats: 30.

Selection will be based on First cum first served basis and subject to the deposition of refundable fee (Rs 2000.00) in the form of demand draft in favor of Registrar, IIT Guwahati, Guwahati, Assam 781039.

ADDRESS FOR CORRESPONDENCE

Name: Prof. S. Kanagaraj
Course Coordinator

Department of Mechanical Engineering
Indian Institute of Technology Guwahati
Guwahati- 781 039, ph: 0361-258-2676/3428
http://www.iitg.ac.in/kanagaraj/

Application Form

1. Name (block letters):

2. Sex: ☐ Male ☐ Female

3. Category: ☐ General ☐ Reserved

4. Highest Academic Qualification:

5. Specialization:

6. Designation & pay scale:

7. Name of the organization:

8. Experience in years:

(a) Teaching: (b) Industrial:

9. Address for communication:

Pin code: Mobile No.:

E-mail:

10. Choice of Accommodation:

☐ Hostel ☐ Will make my own arrangement.

Please register me for the course on **"Gait and Motion Analysis"** to be held at IIT Guwahati.

I am sending an advance copy of this application by email to the coordinator of the course.

I undertake to send the Hard copy signed by the Head of my Institution along with the draft of refundable fee.

Place:

Date: *Signature of the applicant*

ABOUT TEQIP

TEQIP conceived in pursuance of the NPE-1986 (revised in 1992) by Govt of India as a long term program to be implemented in different phases. After successful execution of TEQIP II, TEQIP III starts from 2017-18 as Central Sector Scheme with a focus on the Low Income States, Northeast, Hill States and Islands. The third phase of TEQIP is also special in a way that it incorporates twinning arrangements between mentee & mentor institutions with an emphasis on Focused Training (PT) and Focused Interventions from IITs in terms of deliverables and accountability. KIT, established at IIT Guwahati under 2nd phase of TEQIP is a focal point for training Faculty, Staff and students from TEQIP-III institutions in Knowledge Engineering, Content Creation, Improving Teaching, Pedagogy & administrative skills in identified niche areas/disciplines.

ABOUT KIT

KIT (**K**nowledge **I**ncubation Cell for **T**EQIP) at IIT Guwahati functions as a multi-disciplinary as well as interdisciplinary Innovation Incubation Centre with a focus to impart Knowledge, infusing innovation and leading a path to achieve academic excellence. Its activities are in the area of improving quality of technical education, incubator of Innovative Ideas; implementer of contemporary pedagogy practices and development of Learning Content in Technical institutions while mentoring them.

ABOUT IIT GUWAHATI

IIT Guwahati campus is spread over a sprawling 785 hectares plot of green land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With hills and vast open spaces, the campus provides an ideal setting for training. Details on how to reach IITG Campus are available on the institute website
Website: www.iitg.ac.in