ONE WEEK FDP
ON
COMPUTATIONAL BIOLOGY AND ITS HEALTHCARE APPLICATION

इलेक्ट्रॉनिकी एवं
सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF
ELECTRONICS AND INFORMATION TECHNOLOGY

17th to 21st February, 2025

Organized by:

Electronics & ICT Academy
IIT Guwahati, Assam

In Association with:

Department of Bioengineering and Technology, Gauhati University

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About E&ICT Academy

Electronics and ICT Academy is an initiative of the Ministry of Electronics and Information Technology (MeitY), Govt.of India for conducting various faculty/ Research Scholar Development Programme. Academy has planned short term training programmes on fundamental and advanced topics in IT, Electronics & Communication, Product Design, Manufacturing with hands-on training and project work using the latest software tools and systems. In addition, the Academy will conduct specialized/ customized training programmes and research promotion workshops for corporate sector & educational institutions.

TARGET AUDIENCE

The FDP is open to all Faculty, System Analyst/ Technical Staff and Research Scholar.

PROGRAM MODULE

1. Introduction to Bioinformatics
2. Artificial Intelligence for Bioinformatics
3. Introduction to Computational Systems Biology
4. Artificial Intelligence and its role in Bioinformatics
5. Research Opportunities and Challenges in Bioinformatics using Artificial Intelligence
6. Molecular Docking and its applications
7. Simulation of Blood Flow through Veins
8. Spray modelling
9. Prosthetics stress analysis
10. Case-Study: Simulation Best Practices To Help Fight Communicable Diseases

- Prosthesis
- Spinal Implant
- Ventilators and Ventilation
- UV Disinfection
- Vaccine Manufacturing: Mixing & Scale-up
- Stent Design and simulations, MRI Safety

LAB SESSIONS

Lab 1 : Blood flow through artery
Lab 2: Hyperelastic valve motion under blood flow
Lab 3: Coronary Stent
Lab 4 : Healthcare pump working
Lab 5 : Orthopedic Implants design and analysis

ASSIGNMENTS & PROJECT

1. Assignments will be on MCQ based questionnaire.
2. At the end of the course "Project" will be assigned to the participants which will be based on the Practical Case Studies.

Course Date: 17 Feb to 21 Feb, 2025
Last Date of Registration: 10/02/2025
Online Registration Link will be open from: 06/01/2025
Per Day FDP Timing: 9 AM to 5 PM
Contact Hours for the Course: 40Hrs (Theory, Activities, Case Studies & Evaluation)

Mode of Delivery

Offline at Department of Bioengineering and Technology, Gauhati University

How to Apply?

Online: The participants may log on to the E&ICT Academy, IIT Guwahati website:

https://eict.iitg.ac.in/index_course_categorycate=em9DWXhJQTVkRkdXMUhQT0dtSjkzQT09

Scan the QR for Registration

Registration Link:
https://forms.gle/ZN1sPXh2aCFDjFva9

Registration Fees:
Rs. 500/-
(Inclusive of GST)
Student Fees: 2,950/-
(Inclusive of GST)

For Online Transfer:
Account Name: IIT Guwahati (R & D)
Account No.: 36071160089
IFSC Code: SBIN0014262
Bank Name: State Bank of India