

### Organizing Committee

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Prof. Anil D. Sahasrabudhe, Chairman, AICTE

#### Chairperson

Dr. Amit Prakash, HoD, DECE, NIT Jamshedpur

#### Coordinator

Dr. Mrutyunjay Rout, Assistant Professor, DECE, NIT Jamshedpur

#### Convener

Dr. Prashant Kumar, Assistant Professor, DECE, NIT Jamshedpur

#### Advisory Committee

Dr. R K Soni, Coordinator ATAL Academy Cell

Prof. Sanjay, Dean (R & C), NIT Jamshedpur

Dr. B Goswami, Incharge, ATAL AcademyKolkata

#### Faculty members of DECE, NIT Jamshedpur

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Mr. B N S Munda

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Dr. Ajay Kumar

Dr. BasantaBhowmik

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Prof. S N Singh

Dr.Akhilesh Kumar

Mr. Dilip Kumar

Dr. NagendraKumar

Dr.Basudeba Behera

Dr. Kunal Singh

Dr. Prashant Kumar

### Schedule

	10:00AM to 11:30AM		12.00 PM To 1.30 PM		2:30 PM To 4.00 PM	4:15 PM To 4:45PM
04-08-2021	Inauguration	Lunch Break	Session 1 The Power of Precision Health	Test	Session 2 Is precision medicine the future of healthcare?	Validation
05-08-2021	Session 3 Innovation Powering Progress in Health		Session 4 Curing Disease with More Precise Medical Therapies		Session 5 Artificial Intelligence in Precision Health	
06-08-2021	Session 6 Artificial Intelligence in the management of patients	Feedback	Session 7 Machine learning systems and precision medicine	Test	Session 8 Machine learning in digital health	Validation
07-08-2021	Session 9 EMI/EMC Issues in Precision Health		Session 10 Microcontrollers Programming for Precision Health		Session 11 Meditation and yoga for healthy mind and body	
08-08-2021	Session 12 IoT-Enabled Wearable Devices for Unsupervised Health Monitoring		Session 13 Internet of Medical Things for Smart Healthcare		Session 14 Health Care Environment with Body Area Network	

## Faculty Development Program

### on Precision Health Technology (FDPHPT-2021)

August 4- 8, 2021



Organized by

Department of Electronics and Communication Engineering  
National Institute of Technology, Jamshedpur  
in collaboration with  
AICTE Training And Learning (ATAL) Academy, Kolkata



Venue:

On your Desktop/Laptop/Tablet/Smart Phone with internet connectivity from anywhere

### About NIT Jamshedpur

National Institute of Technology, Jamshedpur earlier known as Regional Institute of Technology (RIT) was established on 15th August 1960 as a joint venture of Government of India and the Government of Bihar in the chain of Regional Engineering Colleges in India with the aim to generate technical graduates of highest standards who could provide technological leadership to the region. On 27<sup>th</sup> December 2002, RIT was transformed to National Institute of Technology, Jamshedpur with the status of a Deemed University. The Institute has 12 departments including engineering, science and humanities. It has more than 200 faculty, 4000 students and 150 administrative and supporting staff. It has a self-contained campus located on the outskirts of Jamshedpur on 341.3 acres of sprawling, rolling hilly, wooded land. It combines natural beauty of countryside with urban glamour of a mineral-rich industrial area in the state of Jharkhand. It is surrounded by giant and medium scale industries and reputed institutes. Being the cradle of technical excellence, the institute took no time in starting online teaching to combat the COVID-19 crisis.

### About the Department

Department of Electronics and Communication Engineering was started in 1988. The department aims to be a national leader in imparting quality education, carrying out research and technology development. The department provides an outstanding research environment and offers academic program leading to B.Tech, M Tech and Ph.D. degrees

### About ATAL Academy Kolkata

AICTE Training And Learning (ATAL) Academy was digitally announced with establishment of four Academies in the country at Jaipur, Vadodara, Guwahati and Trivendram by MHRD, Govt. of India on 24.9.2018. In September 2019, eleven new ATAL Academies have also been established at Dehradun, Kanpur, Bhopal, Bangalore, Chennai, Murthal, Srinagar, Patna, Kolkata, Hyderabad and Pune. Some of the objectives of ATAL being:

- To support technical institutions in fostering research innovation and entrepreneurship through training
- To stress upon empowering technical teachers & technicians using Information & Communication Technology
- To provide a variety of opportunities for training and exchange of experiences such as workshops, orientations, learning communities, peer mentoring and other faculty development programs.

### About the Faculty Development Program FDP PHT-2021

Precision health is an increasingly popular approach to disease treatment and prevention that takes account of an individual's genes, environment, and lifestyle. It allows doctors and medical practitioners to more accurately predict appropriate medical strategies and treatments for an individual. Precision health involves approaches that everyone can do on their own to protect their health as well as steps that public health can take (sometimes called "precision public health"). Precision health focuses on preventing disease before it starts, using the latest technological advances to develop the tools to do so. Technology for Precision Health will explore how technology can help. How can we think differently about gathering, analyzing and sharing information? Which incentives can be offered to structurally change the system toward longer term care of patients? Precision healthcare involves the use of data to provide customized care tailored to an individual patient based on real-time clinical, molecular/diagnostic and exogenous factors. The idea of this FDP is to briefing the latest technological advancements in bioinformatics, statistics, artificial intelligence, blockchain, and other digital technologies used in precision health.

Due to COVID-19 crisis (**FDP PHT-2021**) will be conducted online using Google Meet Application and the registered participants can interact online using their Desktop/Laptop/Tablet/Smart Phone with internet connectivity from anywhere.

### Who can attend FDP PHT-2021

Attendees will include scientists, researchers, administrators, providers, and industry leaders working in the pharma and biotech industries as well as academic medical centers. We will showcase the latest technological advancements in bioinformatics, statistics, artificial intelligence, blockchain, and other digital technologies used in precision health.

Participation in this FDP is open to the faculty members of the AICTE approved institutions, research scholars, PG students, participants from Government and Industry (Bureaucrats and Technicians) and staff of host institutions.

### Registration Fees

There is no Registration fee from any participant.

### Number of seats: 200

**Registration link:** <https://atalacademy.aicte-india.org/signup>

**Selection will be done on first-come first served basis.**

**Last Date for registration: 02-08-2021**

### Topics to be covered

- Recent Technologies for Precision Health.
- Design of a Precision Medication Dispenser: Preventing Overdose by Increasing Accuracy and Precision of Dosage.
- New technologies in precision medicine.
- AI, Machine Learning, and Personalized Treatment.
- Applications of artificial intelligence in precision health.
- Artificial intelligence approaches in predictive models, modeling disease physiology, and public health surveillance.
- Point-of-Care Technologies for the Advancement of Precision Medicine in Heart, Lung, Blood, and Sleep Disorders.
- Precision Medicine through Next-Gen Healthcare Technologies.
- Heterogeneous Integration Technology demonstrations for Future Healthcare.
- Use of Technology to Support Precision Health in Nursing Science.
- Wearable Devices for Precision Medicine and Health State Monitoring
- Elderly Health Care System Based on High Precision Vibration Sensor

### Resource Persons

The course content will be delivered from a pool of resource persons on the subject from leading industries and prestigious academic institutions.

### Pedagogy

PPT slides handout, online lecturing, and demonstration videos.

An online test will be conducted at the end of the program. Digital certificate from AICTE ATAL Academy will be issued to those who have attended the program without any absenteeism and scored minimum 60% marks in the test.

**Email for communication:** [fdppht21@gmail.com](mailto:fdppht21@gmail.com)