

## About the Institution

The Bannari Amman Institute of Technology was established in 1996 by the Bannari Amman Group, serves as one of the citadels of higher education in the Southern part of India. BIT aids to impart knowledge, teamwork, innovation, entrepreneurship, courage, sacrifice and duty which are innards of a meaningful life. The Institute has a team of 552 dedicated members of faculty, 167 with PhD and 225 pursuing PhD programmes. It offers 21 undergraduate programmes and 07 postgraduate programmes and PhD programmes in Engineering, Technology and Management. BIT also has 25 sophisticated research laboratories and 9 centres of excellence for the betterment of students, research scholars and faculty members. The Institution is approved by AICTE, New Delhi. All eligible courses have been ac-credited by National Board of Accreditation (NBA). The institution Accredited by National Assessment and Accreditation Council (NAAC) with A+ Grade & 3.36 CGPA on 4.0 Scale. BIT has achieved 100% placement for the third consecutive year.

## About the Department

The Department of Electronics and Communication Engineering (ECE) which was started in the year 1998 offers a UG Programme (B.E.) in ECE and PG Programme (M.E.) in Communication Systems. The Programme has been accredited by NBA, New Delhi. The department has also been recognised as a centre for carrying out Ph.D./M.S. (By Research) Programme under Anna University. Department of Biomedical Engineering was started in the year 2019. We have a team of committed faculty members who are not only well qualified but are also backed by rich industrial / research / teaching experience.

## Advisory Committee

**Dr. C. Palanisamy,**  
Principal, BIT

**Dr. K. Sivakumar,**  
Dean PDS, BIT

## Coordinator

**Dr. D. Deepa,**  
Professor/ECE

## Co-Coordinator

**Dr. S. Gowthami,**  
AP-III/BME

## Organizing Team Members

Dr. K. Hemalatha, Prof/BME

Ms. S. Caroline Vinnetia, AP/BME

Ms. P. Gopika Ram, AP/BME

Mr. A. Mohammed Abubacker Siddiq,  
AP/BME

Mr. S. Syed Althaf, AP/BME

Ms. S. Nivethalakshmi, AP/BME

Ms. S. Sahinaa, AP/BME

Ms. P. Gowthami, AP/BME

## Address for correspondence

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AP-III / BME

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# AICTE TRAINING AND LEARNING (ATAL) Sponsored Faculty Development Programme On “AI based Precision Health Technology”

04<sup>th</sup> to 09<sup>th</sup> December 2023



Sponsored by



AICTE Training and Learning (ATAL) Academy

Organized by



Organized by

**Department of Electronics and Communication  
Engineering &  
Department of Biomedical Engineering  
Bannari Amman Institute of Technology**

(An Autonomous Institution Affiliated to Anna University,  
Approved by AICTE New Delhi, NBA Accredited and NAAC  
with 'A+' Grade)

**Sathyamangalam - 638 401**

Erode District, Tamil Nadu [www.bitsathy.ac.in](http://www.bitsathy.ac.in)

## **AICTE TRAINING AND LEARNING (ATAL) ACADEMY**

AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development. Council understands that there is a need of the day to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines. It was felt that Training with latest tools and technologies is vital to keeping an institute competitive and more productive. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. It also transforms them to harmonize with society and most importantly to make them a good citizen of the country. Accordingly, it was decided to the opening of AICTE Training And- Learning - (ATAL) Academies. The vision of ATAL academy is to empower faculty to achieve goals of Higher Education such as access, equity and quality and the objective are; To set up an Academy which will plan and help in imparting quality technical education in the country.

### **About the Program**

Precision health technology refers to advanced tools, methods, and approaches that aim to personalize medical care and interventions based on an individual's unique genetic makeup, lifestyle, environment, and health data. The goal of precision health technology is to enhance the accuracy and effectiveness of healthcare by tailoring treatments, prevention strategies, and diagnostics to the specific needs of each patient. The objective of the FDP is to bring Academicians, Research Scholars, and Industry Experts of matching interests on a common

platform to network and have scientific discussions on the latest developments in the fields of "Precision health Technology" and its up-to-date application in AI and genomics. The session is designed to enrich the knowledge on recent developments in the advanced topics Personalized Approach, Genomics and Genetic Information, Data Integration, Early Disease Detection, Tailored Treatment Plans, Drug Development, Predictive Analytics, Patient Empowerment, Ethical and Privacy Considerations and Challenges in Precision health technology by eminent experts in AI and healthcare domain.

### **OBJECTIVE OF THE FDP**

The course will be useful for faculty members of engineering and sciences and Industry person who are interested in learning AI based health technology transformation in precision health. This will aid the faculty members and research scholars from various institutions for their academic and research purpose.

### **TOPICS COVERED**

1. Introduction and Challenges in precision health technology
2. Recent developments in intelligent health technology: Industry perspective
3. Secure health data Analytics with Block chain and Federated Machine Learning
4. Prediction and analysis of Retinopathy of Prematurity – Doctors Perspective
5. Role of point of care devices in precision health care
6. AI and ML applications in cardiac MRI
7. High performance computing in precision health technology

8. Design aspects of precision health devices
9. Need for tailored treatment plan and its solution through AI
10. Patient safety and ethical considerations for technology development

### **THE SESSION SPEAKERS**

The sessions will be handled by eminent persons from reputed Industries / Institutions.

### **GENERAL INFORMATION**

TA will be paid as per the guidelines of ATAL

### **REGISTRATION**

Participants should be faculty members of the AICTE approved institutions, research scholars, PG students, from the HEIs from the same city/within 100 km of host institute are encouraged for registration

The registration is free and participants are suggested to register through AICTE ATAL Portal (<https://atalacademy.aicte.india.org/>)

**Limited to only 50 Participants.**

Last date for Registration: November 20, 2023

Final approved list will be informed through e-mail on **November 23, 2023.**



# AICTE TRAINING AND LEARNING (ATAL) Sponsored Faculty Development Programme



## On "AI based Precision Health Technology" 04th to 09th December 2023

### Speakers



**Session 1**  
**Introduction and Challenges in Precision Health Technology**  
Dr. D. Deepa, Professor, BIT, Sathy



**Session 2**  
**Patient safety and ethical considerations for technology development**  
Mr. Boopathy Sakthivel, CEO, Prashan Medical Technologies, Coimbatore



**Session 3**  
**High performance computing in precision health technology**  
Dr. K. Venkatraman, Managing Partner-Technical, Biovision Medical Systems, Chennai



**Session 4**  
**Prediction and Analysis of Retinopathy of Prematurity- Doctors Perspective**  
Dr. I. Ram Kumar, Senior Assistant Surgeon, GH, Gobichettipalayam



**Session 5**  
**Need for tailored treatment plan and its solution through AI**  
Mr. D. Kishore, Qpi Square Chennai



**Session 6**  
**Secure Health Data Analytics with Block Chain and Federated Machine Learning**  
Dr. P. Vijaykumar, Professor, Department of ECE, SRM Institute of Science and Technology, Chennai



**Session 7**  
**Recent developments in Intelligent Health Technology- Industry Perspective**  
Mr. N. M. Tharanitaran, Technical Lead, SM Tech Sols, Coimbatore



**Session 8**  
**AI and ML applications in cardiac MRI**  
Dr. E. Malar, Professor, Department of EEE, PSGI Tech, Coimbatore



**Session 9**  
**Design aspects of Precision health devices**  
Mr. S. Kumar, Vice President, M/s. TMI Systems, Bangalore



**Session 10**  
**Role of point of care devices in precision health care**  
Dr. K. Hemalatha, Professor, BIT, Sathy

### Event Coordinator

Dr. D. Deepa, Prof - ECE,  
Bannari Amman Institute of Technology

### Event Co-Coordinator

Dr. S. Gowthami, AP - BME  
Bannari Amman Institute of Technology

### General Information

- The registration is free and participants are suggested to register through AICTE ATAL Portal
- TA will be paid as per the guidelines of ATAL

### Organized by

Department of Electronics and Communication Engineering  
&

Department of Biomedical Engineering

Bannari Amman Institute of Technology

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Approved by AICTE New Delhi, NBA Accredited and NAAC  
with 'A+' Grade)

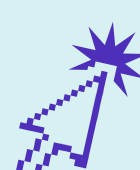
Sathyamangalam - 638 401

Erode District, Tamil Nadu [www.bitsathy.ac.in](http://www.bitsathy.ac.in)



### Registration

Limited to 50 participants



### Registration Link

(<https://atalacademy.aicte.india.org/>)



**ATAL BASIC FDP**  
**“AI BASED PRECISION HEALTH TECHNOLOGY”**

Offline (9:30 am – 5:30 pm)

Day 1 (04.12.2023)	Day 2 (05.12.2023)	Day 3 (06.12.2023)	Day 4 (07.12.2023)	Day 5 (08.12.2023)	Day 6 (09.12.2023)
9:00 – 9:30 Inauguration					
9:30 – 12:00  <b>Session 1</b> <b>Introduction and Challenges in Precision Health Technology</b> <b>Dr. D.Deepa, Professor, BIT, Sathy</b>	9:30 – 12:00  <b>Session 3</b> <b>High performance computing in precision health technology</b> <b>Dr. K. Venkatraman, Managing Partner-Technical, Biovision Medical Systems, Chennai</b>	9:30 – 12:00  <b>Session 5</b> <b>Need for tailored treatment plan and its solution through AI</b> <b>Mr. D. Kishore Qpi Square Chennai</b>	9:30 – 12:00  <b>Session 7</b> <b>Recent developments in Intelligent Health Technology- Industry Perspective</b> <b>Mr. N. M. Tharanitaran, Technical Lead, SM Tech Sols, Coimbatore</b>	9:30 – 12:00  <b>Session 9</b> <b>Design aspects of Precision health devices</b> <b>Mr. S. Kumar, Vice President, M/s. TMI Systems, Bangalore</b>	9:30 – 12:00  <b>Session 10</b> <b>Role of point of care devices in precision health care</b> <b>Dr. K. Hemalatha Professor, BIT, Sathy</b>
12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 Article Discussion	12:00 – 1:00 ReflectionJournal
1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch
2:00 – 4:30  <b>Session 2</b> <b>Patient safety and ethical considerations for technology development</b> <b>Mr. Boopathy Sakthivel, CEO, Prashan Medical Technologies, Coimbatore</b>	2:00 – 4:30  <b>Session 4</b> <b>Prediction and Analysis of Retinopathy of Prematurity- Doctors Perspective</b> <b>Dr. I. Ram Kumar Senior Assistant Surgeon, GH, Gobichettipalayam</b>	2:00 – 4:30  <b>Session 6</b> <b>Secure Health Data Analytics with Block Chain and Federated Machine Learning.</b> <b>Dr. P. Vijaykumar, Professor, Department of ECE, SRM Institute of Science and Technology, Chennai</b>	2:00 – 4:30  <b>Session 8</b> <b>AI and ML applications in cardiac MRI</b> <b>Dr. E. Malar, Professor, Department of EEE, PSGI Tech, Coimbatore</b>	2:00 – 4:30  <b>Industrial Visit to Lakshmi Life Sciences Private Limited, Coimbatore</b>	2:00 – 4:00  MCQ, Feedback& Interactions
4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs		4:00 – 5:00 ValedictorySession

AICTE TRAINING AND LEARNING (ATAL) Sponsored

**Faculty Development Programme On**

**“AI based Precision Health Technology”**

04th to 09th December 2023

Registration Procedure

1. Go to ATAL FDP webpage: <https://atalacademy.aicte-india.org/>
2. Search for the Month: December 2023
3. Search for FDP: Title: [AI based precision health technology](#) Application No: **1691469814**

Title: [AI based precision health technology](#)  
Application No: **1691469814**


STARTS	ENDS
<b>Dec 4, 2023</b>	<b>Dec 9, 2023</b>

Institute: **BANNARI AMMAN INSTITUTE OF TECHNOLOGY**

Thrust Area:

Sub-thrust Area:

[Click here to download FDPs Brochure](#)



4. Click + symbol for registration