Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram

A 10-day short-term course on
Advancements in Signal Processing and Artificial Intelligence in Healthcare

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Organized by
Department of Electronics and Communication Engineering

"Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution."

- Albert Einstein

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Overview of the course

The research and development in biomedical engineering plays an important role to address the challenges faced by society and mankind as a whole. Biomedical engineering is a multidisciplinary specialized field that integrates principles from engineering, physical sciences, mathematics and informatics for the study of medicine and biology, with the ultimate goal of improving human health and quality of life. In lieu of India progressing towards Atmanirbhar and Digital India, solutions for healthcare which could be helping hands for doctors are extremely important. It is an attempt to fetch experts and interested personnel from academia, medical colleges and industry along with researchers and students under a common roof facilitating the exchange of ideas and knowledge about the emerging theory, techniques and deployment of them for the design of biomedical systems. The ten day short term course focuses on major trends and challenges in the biomedical engineering field, and it also presents work meant to recognize the latest cutting-edge tools and techniques and their use in the medical field right from theory to its implementation. Our aim is to help advance scientific research within the broad field of biomedical engineering and artificial intelligence.

Who can participate

The course is open to

- Students
- Faculty members of engineering colleges/ institutes/ universities.
- Participants from govt. departments
- Participants from industry

The number of seats is limited to 80 and selection is based on first come first serve basis.

Course content

- Identification of basic level problems through the lens of medical practitioner
- Basic concepts in biomedical signal and image processing
- Role of AI in healthcare
- Neural networks and its applications to healthcare.
- Computer-aided detection and diagnosis
- Deep learning in medical image analysis
- Transfer learning and domain adaptation
- Case studies (Fundus imaging, etc.)

Speakers

The sessions will be handled by experts from academia, research organizations such as IISc/IITs/NITs/IIITs, medical research institute and industry in the subject area.

About Institute

IIITDM Kancheepuram is a Centre of Excellence for technical education and research established in 2007 by the Ministry of Human Resource Development, Government of India to pursue design and manufacturing oriented engineering education and research and to promote the competitive advantage of Indian products in global markets. The Institute is aimed at providing solutions to current technological challenges in wide domains like healthcare, automotive systems, home entertainment, robotics, telecommunication, etc.

About Department

The Department of ECE at IIITDM Kancheepuram is presently offering B.Tech program in Electronics and Communication Engineering (Design & Manufacturing), Dual Degree program leading to B.Tech and M.Tech Degrees, Ph.D. program in core and applied areas of engineering. The faculty members of the department are also involved in sponsored and consultancy research projects from reputed industries and government organizations.