

### Program Coordinator:

Dr. Tessa Mathew  
Head of the Department,  
Department of CSE.

### Co-Coordinators:

Ms. Prathibha S Nair Ph:8547074309  
Ms. Indu V Ph:9400444434

### Who can apply?

The program is open to Faculty & Research Scholars of Engineering Colleges, Universities and other allied disciplines. Industry persons working in the concerned / allied areas can also apply.

No Registration Fee

### Register at:



<http://shorturl.at/mnlK3>

Online Registration closes  
on 16<sup>th</sup> March, 2022

**MAR BASELIOS**  
COLLEGE OF ENGINEERING AND TECHNOLOGY  
**AUTONOMOUS**

Mar Ivanios VidyaNagar, Nalanchira  
Trivandrum, Kerala

All B.Tech Programmes Accredited by NBA since 2016 | NAAC "A" Graded Institution

## ONLINE SHORT TERM TRAINING PROGRAMME ON "HIGH PERFORMANCE COMPUTING AND DEEP LEARNING FOR IMAGE AND TEXT ANALYSIS" SESSION-2

Sponsored by

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

अखिल भारतीय तकनीकी शिक्षा परिषद्



**21-25 MARCH, 2022**

Organised by

**Department of Computer Science and Engineering**

## About the Institution

Mar Baselios College of Engineering and Technology (MBCET) was established in 2002 by the Malankara Catholic Church realizing the need for an institution to meet the challenges in education in the changing social scenario. The College is situated in Mar Ivanios Vidyannagar one of the largest educational campus in Kerala- amidst 17 Educational Institutions MBCET is affiliated to APJ Abdul Kalam Technological University and offers B Tech, M Tech and Ph D programmes in all major areas of specializations. The College is accredited by NAAC with 'A' grade and all the undergraduate programs are accredited by National Board of Accreditation (NBA).

## About the Department

The Department offers courses that emphasize the fundamental concepts of Computer Science and Engineering, treating today's systems as current examples of the underlying concepts. By educating students to think conceptually, we are preparing them to adapt themselves to the developments in this dynamic field. Our alumni have moved on to a wide range of careers that include software development and design, software testing, artificial intelligence, and other technical computing professions.

## About the Programme

In recent years, various deep architectures with different learning paradigms are quickly introduced to develop machines that can perform similar to human or even better in different domains of application such as medical diagnosis, self-driving cars, natural language and image processing, and predictive forecasting. This Short-Term Training Programme (STTP) intends to provide an opportunity to the faculty and researchers to get insights into the fundamentals, recent research trends in Deep Learning and relevant Hands-on Sessions on various Deep Learning tools and implementation platforms. The objective of this programme is to make the faculty and researchers understand the concepts of deep learning and help them develop deep learning models for image, text and video analysis. The training program offers hands-on sessions on Python tools such as Tensor Flow, PyTorch and familiarize practical applications of Artificial Intelligence and cloud.

## Benefits of the Course

- Hands-on exposure to HPC
- Exposure to Convergence to HPC and AI
- Hands-on experience in working with different software will be provided in Deep Learning
- Workshop on latest techniques

## Resource Persons

- The sessions will be handled by experts on the subject from various reputed institutions

## Course Content

- Recent Trends in Deep Learning Architectures, Residual Network, Skip Connection Network, Fully Connected CNN
- Segmentation-Medical Images-Case study
- Regularisation and Optimization of ML/DL model-(Gradient Descent, Momentum Optimizer, RMSProp, Adam)
- Hands-on- Image Classification, Object Recognition and detection using Tensor Flow/ PyTorch
- Surveillance video analysis through deep learning
- Anomaly detection case study
- Hyperspectral image processing for remote sensing
- Generative Modeling with DL, Variational Autoencoder, Generative Adversarial Network Revisiting
- Sequence Learning Problems
- Machine Translation-RNN based Machine Translation
- Attention Mechanism in Deep Learning
- Hands-on in AI and Cloud