



## ABOUT THE INSTITUTION

Situated amidst 21 Educational Institutions in the Mar Ivanios Vidyanagar, just 5 kms from the heart of the city of Thiruvananthapuram, MBCET stands tall as a symbol of the quest for Professional and Technological Studies. As a proud part of the Mar Ivanios Vidyanagar on the blessed Bethany Hills, deriving the inner strength of truth and goodness from the visionary Patrons, MAR BASELIOS COLLEGE OF ENGINEERING AND TECHNOLOGY (MBCET) inspires the aspirations of generations of knowledge-seekers. Dedicated to mould morally upright, socially committed and intellectually trained Engineers, the College strives to realize its dreams. The aesthetically designed buildings in nine blocks spread over the campus have a total built-up area of over 32000 sq. m.

The institution is accredited with A grade by NAAC and all the under graduate programmes in the college are NBA accredited.



## LOCATION

The college is located at Nalanchira, alongside the MC road.

Nearest Airport - 12km  
Trivandrum International Airport

Nearest Railway Station - 11 km  
Thiruvananthapuram Central

## REGISTRATION

### Who can register ?

Registration is open to all faculty members (all stream) of reputed institutions affiliated to KTU.

### Registration Form

Name :  
Designation :  
Institution :  
Contact No. :  
e.mail id :

Accommodation : Yes/No

Registration form can also be downloaded from [www.mbcet.ac.in](http://www.mbcet.ac.in)

Registration form can be mailed to [jithin.js@mbcet.ac.in](mailto:jithin.js@mbcet.ac.in)

Last date of registration : 24/07/2017

Registration Fee : Rs. 2500/-

The number of seats are limited to fifty.

Registration fee includes food and refreshments.

Accommodation can be arranged on request.

## COMMITTEE

### Advisors

Rev. Fr. Wilson Thattarathundil  
Bursar, MBCET

Dr. T. M. George  
Principal, MBCET

### General Convener

Dr. M. Satyakumar  
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### Programme Convener

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## FACULTY DEVELOPMENT PROGRAMME ON

# “PRODUCT DEVELOPMENT OF AN IoT DEVICE”

Topics based on  
Design Project and Interdisciplinary Project  
of the KTU Syllabus

INTERNET  
Of THINGS

26<sup>th</sup> to 28<sup>th</sup> July 2017

Organised By

DEPARTMENT OF CIVIL ENGINEERING



**MAR BASELIOS**  
COLLEGE OF ENGINEERING AND TECHNOLOGY

Mar Ivanios Vidya Nagar, Nalanchira P. O.

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In Association with



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

KERALA



## ABOUT THE PROGRAMME

The program deals with Product Development process of an IoT (Internet of Things) technology device. The objective of the program is to develop practical understanding of the engineering applications of emerging technology in fields of Design, Development and Validation. Scope of the program includes comprehension of market applications through case study illustrations and acquiring practical experience through hands-on sessions. Targeted to reach out to Faculty of Mechanical, Civil, Electrical and Electronics departments, the program strives to impart solutions to academia in integrating trending technology with emerging focus in UG curriculum on Design-Thinking and cross-functional product development projects.

The syllabus of KTU under graduate curriculum stresses on Design Simulation Innovation through Design-Thinking in first year, Design-Project in third year, and Cross-functional NPD project in the final year.

The programme is KTU syllabus integrated and supports the Industry demand. The topics are based on the design project and inter disciplinary project as per the KTU curriculum.

### Course content includes

- Design-Thinking and Form factor
- Mechanical part design
- Structural design
- Circuit design
- IoT basics
- Product Design principles
- Design Development process
- 3D printing, RPT and beyond
- Product Validation procedures

### Collateral opportunities

- Skill certification courses
- Selection eligibility for core engineering
- Design/FEA contest qualifying
- Entrepreneurial empowerment
- Earn-while-Learn/Teach
- Higher studies abroad
- Jump-start career



## OBJECTIVES

- Presentation of inter-disciplinary technology topics
- Engineering case studies illustrating application of technology
- Integrating Product Development methodology with UG curriculum
- Acquiring practical skills for innovation through modelling & simulation

## PROGRAMME SCHEDULE

### Day 1

- 9.00 am : Registration & Inauguration
- Introduction to the FDP session and its objectives
- 10.00 am: Relevance of simulation aided innovation – (Presentation) – Technology trends and applications in product engineering
- Design-Thinking in design of structures, equipments, gadgets
- 11.15 am: Mechanical part design in an IoT device
- Circuit design in an IoT device
- 1.00 pm : Practical session tracks (Exercises)
- Track 1: Structural design [for Mechanical & Civil faculty]
- Track 2: Circuit design [for Electronics & Electrical faculty]

### Day 2

- 9.30 am : Basics of IoT (Case-study presentation)
- Engineering Design principles
- Product Development process
- 1.00 pm : Practical session tracks (Exercises)]
- Track 1: Design Development [for Mechanical/Civil faculty]
- Track 2: Integration & Tests [for Electronics/Electrical faculty]

### Day 3

- 9.30am : Emerging trends in 'Innovation by Simulation'
- 3D-printing, RPT & beyond
- Product validation procedures
- 1.30 pm : Cross-functional, inter-disciplinary practices (Exercises)
- Industry-Institute-Integration Initiatives (Take away)
- Wrap-up session