

SYSTEMS AND IOT IN BIOMEDICAL **APPLICATIONS**

EMBEDDED

(ESIBA)



5 DAYS FACULTY DEVELOPMENT JULY 12-16 2021 PROGRAMME

ORGANISED BY

DEPARTMENT OF BIOMEDICAL ENGINEERING (BME), SAHRDAYA COLLEGE OF ENGINEERING AND TECHNOLOGY





Sahrdaya College of Engineering & Technology

Sahrdaya College of Engineering and Technology (Sahrdaya), was established in 2002, and is promoted by the Irinjalakuda Diocesan Education Trust, is an ISO 9001:2015 certified Institution. Sahrdaya also holds accreditation from NAAC and Institution of Engineers (India), which is considered as one of the fastest-growing Engineering College in Kerala with recognition from the Department of Scientific and Industrial Research (DSIR) of Govt. of India as Scientific and Industrial Research Organization (SIRO). State-of-the-art infrastructure of the institute spread over 45 acres green campus with a total built-up area of 57854 sq.m.

Deptartment of Biomedical Engineering

The Department of Biomedical Engineering at Sahrdaya College of Engineering & Technology was established in 2002. Department has been offering B.Tech program in Biomedical Engineering, being one among the few in the state itself. Being truly interdisciplinary and modern in its core, the program evolved as unique and highly rated, among the academic and industrial fraternity in the country for its graduate's industry-ready skills.

Since its beginning, the Department itself has been established as a center for funded research and projects, as well as industrial tie-ups. The much appreciated industrial Center of Excellence in collaboration with the tech major GE Healthcare and an Innovation Hub by IVD leader Agappe Diagnostics are few feathers among the many praiseworthy initiatives by the Department.

Vision :

Emerge as a pioneer in Biomedical Engineering for providing affordable and accessible Biomedical Technology.

Mission :

- Nurture high caliber biomedical professionals by integrating science, mathematics, engineering and medicine through quality education with excellent faculty and infrastructure.
- Facilitate extensive hands-on training, interdisciplinary research and innovations by collaborating with medical and industrial experts.
- Encourage graduates to be socially and ethically responsible biomedical engineers for the betterment of society.

About the FDP

The KTU sponsored 5-day FDP on Embedded Systems and IoT in Biomedical Applications (ESIBA 2021) will be a comprehensive workshop covering open-source embedded product development tools, PIC microcontroller architecture, programming, and product development for Biomedical applications. The FDP will also cover Medical applications of IoT, Introduction to high accuracy electronic circuits for interfacing sensors, and Industrial aspects of embedded product development suitable for research scholars and Industry persons working in the healthcare industry. The primary purpose of the workshop is to inculcate the ability of problem-solving and product development in the field of Biomedical Engineering.

The topics covered include :

- > Introduction to high-accuracy interfacing circuits suitable for capacitive and resistive sensors.
- Open source embedded product development tools and programming.
- Serial Communication, ADC a PWM, interfacing with sensor modules (Hands-on training with temperature sensor, pressure sensor, heartbeat sensor, flow sensor).
- Introduction to NodeMCU a Hands-on training of simple IoT connection establishment using NodeMCU.
- > Hands-on training of IoT-based sensor data monitoring.
- Introduction to PIC microcontrollers and Hands-on training of PORT programming and ADC programming in PIC16 series MCU.
- > Hands-on training of LED Switch interfacing and LCD interfacing in PIC16 series MCCJ.
- Hands-on training of IJART programming & PWM programming in PIC16 series MCU.
- Interfacing PIC 16 series MCU with sensor modules (Hands-on training with temperature sensor, pressure sensor, heartbeat sensor).
- Product Development for medical embedded applications.

FDP COORDINATORS

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Prof. Lyla B Das





Resource Persons)

Mr. Ramesh



Mr. Rajesh





Mr. Varghese Ouseph Dr. Sreenath Vijayakumai sociate Vice President (R&D), Agappe Diagnostics Ltd. Electrical Engineering, IIT

REGISTRATION

- Last Date for Registration- 08-07-2021
- Link for registration: https://bit.ly/3qwhPZn
- Maximum participation limits to 60. Book your seat.
- Certificates will be issued on successful completion.

Department of Biomedical Engineering

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