# B.M.S. COLLEGE OF ENGINEERING, Bengaluru-19

## Department of Medical Electronics Engineering

*Value Added workshop*
*Date: 15 November 2024 & 16 November 2024*

*On*

# *freeRTOS for Embedded System Design*


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The Department of Medical Electronics Engineering conducted a two-day value-added hands-on workshop on “freeRTOS for Embedded System Design” on 15-16 November. The workshop was conducted in offline mode at Computational Lab, Department of Medical Electronics, BMSCE.

The course was distributed for a period of 4 sessions and was conducted by resource person- **Mr.Darshan Hegde, Design Engineer at Advanced Micro Devices (AMD)**. He covered various topics on introduction to freeRTOS and its usage for Embedded system design using STM32 board. Fundamentals of RTOS, creation of tasks, interprocess communication handling semaphores in RTOS, these hands on exercises were performed by students under the Guidance of resource person.

The sessions were from 10 a.m. to 1 p.m. and 2 p.m. to 4:30 p.m. on both the days. In the first session, the resource personnel gave a brief about freeRTOS. The topics he covered are introduction to embedded systems. He continued discussing topics like declaring tasks, queues, semaphores, software timers, mutex, etc. He also explained about the usage of STM32 software. We executed programs such as blinking of LEDs on the ARM Cortex board by interfacing it with the software. The sessions were hands-on and very interactive. Each

student had to do the mini experiments being taught, simultaneously. By the end of the fourth session, the students were well versed in the basics of freeRTOS and could program small projects related LED blinking and interfacing of STM32 board and software. The course ended with a small session, where the students shared their experiences and takeaways from the works.

Overall, the two-day value-added hands-on workshop on “freeRTOS for Embedded System Designing” was very useful to utilize the concepts learnt for project work. The course provided an excellent platform for participants to enhance their skills in the aspect of industry requirement for embedded systems. The course gave participants a fresh insight into the world of embedded system design.


**29.11.2024**

Signature of Coordinator

Signature of HOD