



**K.S.RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE - 637215**

**Department of Electronics and Communication Engineering**

**Mode of Content Delivery- Learning by Doing**

Batch : 2022-2026  
Course Code : 60 EC 601 Academic Year : 2024-2025  
Course Name : Embedded Systems Year / Sem / Sec : III/VI/A  
Name of the Course : Dr. D. Mugilan  
Instructor  
Module : Embedded Systems

S.No.	Date	Topics	Software for Learn by Doing
1.	23.01.2025	Bitwise operation – AND, OR, NOT	STM32CubeIDE <ul style="list-style-type: none"><li>• Complete development and debugging environment for STM32 microcontrollers</li><li>• Provides libraries and drivers for UART, I2C and GPIO (BSRR)</li><li>• Hands-on practice with STM32 Cortex-M microcontrollers</li></ul>
2.	24.01.2025	Bitwise operation – Bit shifting	
3.	14.02.2025	UART: Protocol – Handshaking	
4.	21.02.2025	Port accessing – BSRR	
5.	04.03.2025	I2C Interfacing	

**Outcome**

Learners gained skills in **bitwise operations**, **UART handshaking**, **GPIO control using BSRR**, and **I2C interfacing** on STM32 microcontrollers. They are able to write, debug and optimize embedded C code using STM32CubeIDE. This hands-on experience will enhance their proficiency in real-time embedded system development.

**YouTube Link:**

<https://youtube.com/shorts/FQW9TgxFk2M>

**Feedback and Response Link:**

<https://docs.google.com/forms/d/1-s05mIze5jvxhDdwyZq-CDgqOwYve9z40fbCFsz319M/edit>

**Course Instructor**

**Program coordinator**