



# ST FRANCIS DE SALES COLLEGE

Permanently Affiliated to Bangalore University || AICTE Approved Electronic City, Bengaluru - 100

Reaccredited by NAAC with B++ Grade | Recognized under section 2(f) & 12(b) of the UGC Act | An ISO 9001: 2015 Certified Institution

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## Proposal for Add on Course

Academic Year 21-22

<b>Title of the Course</b>	Arduino based Embedded System Design
<b>Date of Registration (From- to)</b>	
<b>Date of Commencement</b>	1st week of June 2022
<b>Date of Completion</b>	Last week of July 2022
<b>Platform (Online/Offline)</b>	Online
<b>Duration</b>	30 hours
<b>Target Audience</b>	BSc
<b>Registration Fee</b>	NO FEES
<b>Course Facilitators</b>	Prof. Maya Mathew Prof Jenifer Sujitha
<b>Module 1</b>	<ul style="list-style-type: none"><li>• Introduction to embedded system</li><li>• Getting Started with Arduino</li><li>• Review of Basic Concepts</li><li>• Arduino I/O functions</li><li>• Arduino I/O devices</li></ul>
<b>Module 2</b>	<ul style="list-style-type: none"><li>• Arduino Time</li></ul>

	<ul style="list-style-type: none"> <li>• Arduino Displays</li> <li>• Arduino Sensors</li> <li>• Arduino Simulators</li> <li>• Arduino Projects</li> </ul>
<b>Objectives of the Course</b>	To understand the Arduino open source computer hardware /software platform for building digital devices and interactive objects that can sense and control the physical world around us.
<b>Outcome of the Course</b>	Learners will be specialized in Embedded System Design using Arduino
<b>Name and Contact details of HOD and Course Facilitators</b>	Dr. Nebula M ,HOD Department of science( <a href="mailto:bsc_hod@sfdccollege.in">bsc_hod@sfdccollege.in</a> ) Prof. Maya Mathew ( <a href="mailto:mayamathew@sfdccollege.in">mayamathew@sfdccollege.in</a> ) Prof. Jenifer Sujitha ( <a href="mailto:jenifersujitha@sfdccollege.in">jenifersujitha@sfdccollege.in</a> )
<b>Any other details the Department wished to add</b>	-

#### Points to Note:

- Separate forms to be filled for different courses
- The syllabus of the Add on Course can be designed by the Department. It can have two modules.
- The main topic and the subtopics of each module should be mentioned.
- Each module should have 15 recorded videos/sessions, one quiz and one assignment.
- Each recorded video should be 45 – 60 minutes.
- A complete set of instructions for the Certificate/Add on course will be sent in the due course.



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## Letter of Appointment

The Curriculum Enrichment Committee is pleased to appoint the following faculty as the course facilitators of the Certificate/Add-On **Arduinio Based Embedded System Design** from the **Department of Science - UG**. They will be responsible for designing and developing the curriculum for the Certificate/Add On course, conducting the courses, and evaluating the course for the even semester 2021-2022.

S.No	Name	Designation
1	Prof. Maya Mathew	Assistant Professor
2	Prof. Jenifer Sujitha	Assistant Professor

  
COORDINATOR  
Curriculum Enrichment Cell  
St. Francis de Sales College  
Bengaluru - 560100

Date: 01.05.2022

Place: Bangalore

  
PRINCIPAL  
St. Francis de Sales College  
Electronics City Post, Bangalore - 560 100



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Title	Add on Course on Arduino based Embedded System Design
Date of Event	5 th June 2022-12 th August 2022
Department	Department of science (Electronics)
Venue	Class Room 410
Number of Participants	All BSC Students
Coordinators	William Alfred

Department of Science, St Francis de Sales College organized Add on Course on Basic Electrical spares and Geyser for all the students of Science. The course is divided in two modules

Module 1	<ul style="list-style-type: none"><li>• Introduction to of Electrical spares</li><li>• Electrical safety and its usage</li><li>• Electrical Spares functions</li><li>• Electrical Do's and Do no's</li></ul>
Module 2	<ul style="list-style-type: none"><li>• Introduction of Geyser</li><li>• Types of Geyser</li><li>• Geyser Function and usage</li><li>• Geyser safety rules</li><li>• Tips on usage of Geyser</li></ul>

### Objective

To understand Electrical Spare in the household and our day to day life, and interactive objects that can sense things world around us. To develop skills to know the basic electrical spare and repairs. This have improved student to repair small defect and rectification within their source from home. Student have an idea how they can choose and plan for their own house into

safety side.

Outcome : Student understand about the basic electrical spares and its function in day to day life.

*MAS*  
11/01/23

*[Signature]*

COORDINATOR  
Curriculum Enrichment  
St. Francis de Sales College  
Bengaluru - 560100

*[Signature]*  
11/01/2023

COORDINATOR  
Curriculum Enrichment Cell  
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*Royce*

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## A FRANSALIAN INSTITUTE OF HIGHER LEARNING

Title	Add on Course on Arduino based Embedded System Design
Date of Event	5 th July 2022-12 th August 2022
Department	Department of science (Electronics)
Venue	Electronics Lab
Number of Participants	All BSC Students
Coordinators	Prof. Maya Mathew ,Prof. Jenifer Sujitha

Department of Science, St Francis de Sales College organized Add on Course on Arduino based Embedded System Design for all the students of Science. The course is divided in two modules

Module 1	<ul style="list-style-type: none"><li>● Introduction to embedded system</li><li>● Getting Started with Arduino</li><li>● Review of Basic Concepts</li><li>● Arduino I/O functions</li><li>● Arduino I/O devices</li></ul>
Module 2	<ul style="list-style-type: none"><li>● Arduino Timer</li><li>● Arduino Displays</li><li>● Arduino Sensors</li><li>● Arduino Simulators</li><li>● Arduino Projects</li></ul>

### Objective

To understand the Arduino open source computer hardware /software platform for building digital devices and interactive objects that can sense and control the physical world around us. To develop skills to design and implement various smart system application Arduino is an open source programmable board. It is very easy to use and powerful single board computer that has gained considerable traction in the hobby and professional

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market. It consists an Integrated Development Environment (IDE) where one can write and run the programs and these programs are known as sketch in arduino and a microcontroller. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online.

Outcome

Learners will be specialized in Embedded System Design using Arduino.





# ST FRANCIS DE SALES COLLEGE

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A FRANSALIAN INSTITUTE OF HIGHER LEARNING

Department of Science, IC Club

Presents

Add on Course on Arduino Based

Embedded System

5<sup>th</sup> July-12<sup>th</sup> August 2022

Handwritten notes and stamps on the right side of the page, including a date stamp '2022/10/11' and a signature.