

Texas Instruments (India) Pvt. Ltd.



Texas Instruments (India) Pvt. Ltd.  
Bagmane Tech Park  
No. 66/3, Adjacent to LRDE  
Byrasandra, C V Raman Nagar Post  
Bangalore - 560 093, INDIA  
Phone: +91 80 2534 5454, +91 80 2534 5455  
Fax: +91 80 2504 8308  
e-mail: bangalore-sales@ti.com

GP NO: 67499

Date : Apr 15, 2021

**TO WHOMSOEVER IT MAY CONCERN**

We hereby declare that the items in the package are not for sale & do not involve any commercial transaction. These are being sent to **M/s. SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT** for internal use.

These are sent free of cost to the consignee. The value declared is true and correct to the best of my knowledge.

**Description**

QTY:10, REF NO:20L10352-1, DESC:MSP430 LUNCHBOX, PO:, ECCN:EAR99, HTSN:854210

The Value mentioned is for Customs purpose only and it's a true and fair market value of the product.

Value: Rs - 5240

TIN: 29760082044

GSTIN : 29AAACT5445M1ZV

CST: 13464103 dt:04.06.1986

For Texas Instruments India Pvt. Ltd.

Authorized Signatory

To  
Attn:NAGARAJA RAO  
SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT  
SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT VISHWOTHAMA  
NAGARA,BANTAKAL,UDUPI 574115  
UDUPI-574115  
9945357819

These commodities, technology or software were exported in accordance with the U.S Export Administration Regulations. Diversion contrary to U.S. law prohibited

  
Principal  
SHRI MADHWA VADIRAJA  
INSTITUTE OF TECHNOLOGY & MANAGEMENT  
Vishwothama Nagar, Udupi Dist.  
BANTAKAL - 574 115







DELIVERY CHALLAN

**STEPS KNOWLEDGE SERVICES PVT. LTD.**

"Shri Nivas" 26, 2nd Street, Kasthuri Nagar,  
Trichy Road, Ondipudur, Coimbatore - 641016

GST : 33AAOCS9157M1ZK

Phone : 0422 - 2271011  
Mobile : 9629711011

E - mail : contact@stepsmail.com  
www.stepsknowledge.com

To Shri Madhwa Vadiraja Institute of  
Technology and Management  
Vishwothama Nagar, Bantakal  
Udupi - 574 115, Karnataka.

DC NUMBER : 1152

DATE : 16/03/2019

Ref

Dear Sirs

Kindly receive the following goods and return the duplicate copy duly signed

Sl.No.	DESCRIPTION	QUANTITY
D	RSLK - Basic kit	06 No's

NOT-FOR SALE

Received the above goods in good condition

For STEPS KNOWLEDGE SERVICES PVT. LTD.

Receiver's Signature

Authorized Signatory

*[Signature]*  
Principal  
SHRI MADHWA VADIRAJA  
INSTITUTE OF TECHNOLOGY & MANAGEMENT  
Vishwothama Nagar, Udupi Dist  
BANTAKAL - 574 115

S/NO	Issued Date	Item Description	Name & USN Student details	City	Return Date	Sign/Remark
01	06/06/22	Lunch box kit	<sup>6th Sem</sup> Prasanna Nayak	01	06/06/22	HOD
02	06/06/22	Lunch box <del>kit</del> <sup>kit</sup>	menaka sivan	01	06/06/22	HOD
03	06/06/22	Lunch box	<sup>19EC024</sup> meghana	01	06/06/2022	<del>HO</del>
04	7/6/22	IR sensor	shruvya 055	02	-	
05	7/6/22	MSP 430 kit	<sup>6th Sem</sup> Shanthi Kumar	01	08/06/2022	HOD
06	7/6/22	MSP430 kit	Pratheekha	01	7/6/2022	<del>HO</del>
07	7/6/22	MSP430 kit	chandrabala	01	06/06/2022	D-19
08	7/6/22	MSP430 kit	Nurma	01	7/6/2022	<del>HO</del>
09	7-6-2022	MSP430 Kit	Pranjwal	01	7-06-2022	Pranjwal
10	7-6-2022	MSP430 kit	Pranjwal U	01	8-6-22	<u>Pranjwal</u>
11	8-6-2022	MSP430 Kit	Shanthkumar	01	9-6-2022	<u>Shanthkumar</u>
12	10-6-2022	MSP430 kit	Rithesh Kumar	01	10-6-22	<del>HO</del>
13	10/6/22	MSP 430	<sup>6th Sem</sup> Yashashwini	01	10-06-22	<u>Paise</u>
14	10/6/22	MSP430	Swathi Bhat	01	10-6-22	<u>Swathi Bhat</u>
15	10/6/22	MSP 430	Srinathi SK	01	15/6/22	<u>Srinathi</u>
16	15/6/22	Bread board <sup>kit</sup>	<sup>19EC012</sup> Chaya <sup>6th Sem</sup>	01 each	25/6/22	HOD
17	15/06/22	Lunch Box Kit	4MW19E 0068	01 each	06/22	<u>Prinilla</u>

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15/06/2022	Lunch box kit	4111111111		
15/6/22	9v battery wire	6111111111 Rachana	1	25/6/22
16/6/22	Lunch box	Shriparvathi 4111111111	1	16/06/2022
16/6/22	MSP340	Nurmo B Shetty 4111111111	1	16/06/2022
16/6/22	mSP430	Yashaswini	1	17/06/22
16/6/22	mSP 430	Rithesh	1	18/6/22
16/6/22	mSP 430	Prasanna	1	16/6/22
16/6/22	Lunch <del>box</del> box	4111111111	1	16/6/22
16/6/22	Lunch Box	4111111111	1	17/06/22
17/6/22	Lunch Box	EC003 Adithya	1	17/06/22
17/6/22	Lunch box	009, 30 Ankitha, Bhoojika	1	17/06/22
17/6/22	lunch box	Harshitha	1	12-6-22
17/6/22	---	063 Shreyas	02	18-6-22
17/6/22	lunch box	4111111111 Dheeraj A. Sivanna	1	17/6/22
17/6/22	lunch box	Chandravata	1	17/6/22
17/6/22	Lunch box kit	Chiranjeev	1	17/6/22

**SHRI MADHWA VADIRAJA  
INSTITUTE OF TECHNOLOGY AND MANAGEMENT**  
(Accredited with grade 'A' by NAAC)



Presents

**VALUE ADDED COURSE**  
on  
**" IOT & EMBEDDED SYSTEM"**

Organized by

**Department of  
Electronics & Communication Engineering**

Coordinated by

Mr. Chetan R, Sr. Asst. Professor, ECE Dept.  
Mr. Krishna Kumar P, Sr. Asst. Professor, ECE Dept.  
Ms. Vimitha, Asst. Professor, ECE Dept.  
Mr. Shravan, Asst. Professor, ECE Dept.

Approved by

Dr. Sachin Bhat, Associate Professor, Dept. of ECE

  
Principal



## ABOUT THE COURSE

The ever growing network of technologies connecting and communicating via the internet to send and receive data in the absence of human-to-human or human-to-computer interaction. IoT consists of a network of smart devices, sensors, and actuators interconnecting with each other over the internet. IoT is rapidly evolving throughout the embedded industry. It is projected that there will be about 50 billion IoT devices connected to the internet by 2030. In this course, students will learn about sensor programming on an embedded device, IoT device provisioning, and the latest wireless communication protocols including Wi-Fi, Bluetooth, and transport protocols such as MQTT. Students will also explore the IoT data processing life cycle which includes capturing, cloud storage, and analyze data to various IoT devices. At the end of the course participants will be able to design a prototype of an IoT solution using sensor data, communication protocol, cloud, safety, and security risks.

Embedded Systems surround us in the form of gadgets and devices that we use. There is no aspect of human lives, which is untouched by such devices at home or for health diagnostics, transportation, and entertainment. Learning about Embedded Systems will give the skills to design and manufacture embedded system products of the future which will help participants towards better employability. This course teaches embedded system design using a building block approach, which allows one to visualize the requirement of an embedded system and then to design it efficiently. The course will teach embedded system design using a microcontroller, namely Texas Instruments MSP430 low power microcontroller. The course will introduce various interfacing techniques for popular input devices including sensors, output devices and communication protocols. It will teach power supply design for embedded applications. It will also teach effective embedded programming techniques in C and how to maintain code using GIT. It will have a significant practical component, which will be achieved through a MSP430 microcontroller kit, to be distributed for free, to selected participants. Embedded C Programming is the soul of the processor functioning inside each and every embedded system. We come across in our daily life, such as mobile phones, washing machines, and digital cameras. Each processor is associated with embedded software. The first and foremost thing is the embedded software that decides to function of the embedded system. Embedded C language is most popularly used to program the microcontroller.

  
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## COURSE CONTENTS

Module	Topics	Duration
1	<b>Embedded C:</b> Introduction to C, Operators, Control Flow, Modular Programming, Preprocessor, Storage Classes, Arrays, Strings-Character Arrays	10hrs
2	<b>IOT:</b> Introduction to Arduino, interfacing sensors & actuators, Robotics, Communication Protocol Wifi, Bluetooth, Cloud interfacing and Android App development. Project based learning (Peer Learning)	10hrs
3	<b>MSP 430:</b> Introduction, Internal architecture, ISA, ALP Programs, Step by Step Installation, Lunchbox Hardware, Sensors and Actuators.	10hrs

## COURSE OUTCOME

CO No.	At the end of the course, Students will be able to	Bloom's Level
CO1	Write the structured program to address the complex embedded systems applications	L3
CO2	Design a prototype of an IoT solution using sensor data, communication protocol, cloud, safety, and security risks.	L4
CO3	Explore the ISA and design the embedded systems	L3

*Cognitive levels as per Bloom's Taxonomy: L1-Remembering, L2-Understanding, L3-Applying, L4-Analyzing, L5-Evaluating & L6-Creating*

## Mapping of COs with POs (Course articulation matrix)

	Engineering Knowledge	Problem Analysis	Design & Development of Solutions	Conduct Investigations of Complex Problems	Usage of Modern Tools	Engineer & Society	Environment Sustainability	Ethics	Individual & Team Work	Communication	Project Management Finance	Life-long Learning		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2		2	2				2				3	2
CO2	2	2	2		2				2				3	2
CO3	2				2				2				3	2

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## COURSE DELIVERY SCHEDULE

Module	Topics Covered	Faculty	Mode of Delivery	Date on which topics covered	
				3A	3B
1	Introduction to C,	<b>Mr. Shrvan, Asst. Professor, ECE Dept.</b>	PPT	27/10	26/10
1	Operators,		PPT	27/10	26/10
1	Control Flow,		PPT	27/10	26/10
1	Modular Programming,		PPT	10/11	2/11
1	Preprocessor,		Hands-on	10/11	2/11
1	Storage Classes,		Hands-on	10/11	2/11
1	Arrays,		Hands-on	17/11	9/11
1	Strings-Character Arrays		Hands-on	17/11	9/11
1	Exercise		Hands-on	17/11	9/11
1	Exercise		Hands-on	24/11	16/11
2	Introduction to Arduino,	<b>Mr. Krishna Kumar P, Sr. Asst. Professor, ECE Dept.</b>	PPT	24/11	16/11
2	Interfacing sensors		PPT	24/11	16/11
2	Interfacing actuators,		PPT	1/12	23/11
2	Robotics,		PPT	1/12	23/11
2	Communication Protocol Wifi, Bluetooth,		Hands-on	1/12	23/11
2	Cloud interfacing		Hands-on	8/12	30/11
2	Android App development.		Hands-on	8/12	30/11
2	Project based learning (Peer Learning)		Hands-on	8/12	30/11
2	Project based learning (Peer Learning)		Hands-on	15/12	7/12
2	Project based learning (Peer Learning)		Hands-on	15/12	7/12
3	Introduction,	<b>Mr. Chetan R, Sr. Asst. Professor, ECE Dept. Ms. Vimitha, Asst. Professor, ECE Dept.</b>	PPT	15/12	7/12
3	Internal architecture,		PPT	22/12	14/12
3	ISA,		PPT	22/12	14/12
3	ALP Programs,		PPT	22/12	14/12
3	Step by Step Installation,		Hands-on	29/12	21/12
3	Lunchbox Hardware,		Hands-on	29/12	21/12
3	Sensors		Hands-on	29/12	21/12
3	Actuators.		Hands-on	5/1	28/12
3	Exercise		Hands-on	5/1	28/12
3	Exercise		Hands-on	5/1	28/12

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**Attendance Sheet:**

Sl No.	USN	Student Name	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	DAY 8	DAY 9	DAY 10
1.	4MW20EC002	ABHILASH NAIK	P	P	P	P	P	P	A	A	P	P
2.	4MW20EC003	ABHISHEK	P	P	P	P	P	P	P	P	P	P
3.	4MW20EC004	ACHINTHYA	P	P	A	A	A	P	P	P	P	P
4.	4MW20EC005	ADARSH	A	A	P	P	P	P	P	P	P	P
5.	4MW20EC006	ADARSH P PATIL	P	P	P	P	P	P	P	P	P	P
6.	4MW20EC007	ADITHYA D NAYAK	P	P	P	P	P	P	P	P	P	P
7.	4MW20EC008	ADITHYA PRAKASH	A	P	P	P	P	P	P	P	P	P
8.	4MW20EC010	ANKITHA	P	P	P	P	P	P	P	P	P	P
9.	4MW20EC011	ANKITHA ANNAPPA SHET	A	P	P	P	P	P	P	P	P	P
10.	4MW20EC012	ANUSHA (RAMACHANDRA)	P	P	P	P	P	P	P	P	P	P
11.	4MW20EC013	ANUSHA(KRISHN A NAIK)	P	P	P	P	P	P	P	P	P	P
12.	4MW20EC014	ANUSHA A R	P	P	P	A	P	P	P	P	P	P
13.	4MW20EC015	ASHISH CHANDRAN	P	P	P	P	P	P	P	P	P	P
14.	4MW20EC016	ASHWINI	P	A	A	P	P	P	P	P	P	P
15.	4MW20EC017	ATHMIKA SHETTY	P	P	P	P	P	P	P	P	P	P
16.	4MW20EC018	AUSTON ANTONY BARBOZA	A	A	A	A	A	P	P	P	P	P
17.	4MW20EC019	HITHA L SHETTY	A	A	A	P	P	P	A	A	P	P
18.	4MW20EC020	JEEVAN KUMAR	P	P	P	P	P	P	P	P	P	P
19.	4MW20EC021	K PREETHIKA KAMATH	P	P	P	P	P	P	P	P	P	P
20.	4MW20EC022	KAZI MOHAMMED	A	A	A	P	A	A	P	P	P	P

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BANTAKAL, 575102

		NABHAN										
21.	4MW20EC024	KEERTHANA	P	P	P	P	P	P	P	P	P	P
22.	4MW20EC025	LLOYD WINSTON PINTO	P	A	P	P	P	P	P	P	P	P
23.	4MW20EC026	M DEEPAK ADHIKARI	A	P	P	P	P	P	P	P	P	P
24.	4MW20EC027	MAHIMA V POOJARY	P	P	A	P	A	P	A	A	P	P
25.	4MW20EC028	MANASA ACHARYA	P	P	P	P	P	P	P	P	P	P
26.	4MW20EC029	MANASA GANAPATI BHAT	P	P	P	P	P	P	P	P	P	P
27.	4MW20EC030	MANISH JOGI	A	P	A	A	P	P	P	P	P	P
28.	4MW20EC031	MEDINI SANTHOSH NAIK	A	P	P	P	P	P	P	P	P	P
29.	4MW20EC032	MOOLYA HARSHATHA SADANANDA	P	P	P	P	P	P	P	P	P	P
30.	4MW20EC033	N G SOWJANYA	P	A	P	P	P	P	P	P	P	P
31.	4MW20EC034	NAGARAJ	P	P	A	P	P	P	P	P	P	P
32.	4MW20EC035	NIKHITHA SHETTY	A	P	P	P	P	P	P	P	P	P
33.	4MW20EC036	NISHA JOSNA DSOUZA	A	A	A	A	A	A	P	P	P	P
34.	4MW20EC037	PAVAN SHETTIGAR	A	P	A	P	A	P	P	P	P	P
35.	4MW20EC038	POOJA	A	P	A	P	A	P	P	P	P	P
36.	4MW20EC039	PRABHU KUMAR	A	A	A	A	A	A	A	P	P	P
37.	4MW20EC040	PRASANNA G SHET	A	P	A	P	A	P	P	P	P	P
38.	4MW20EC041	PRASHA S	P	A	P	P	A	A	A	A	A	P
39.	4MW20EC042	PRATHAM	A	P	A	P	P	P	P	P	P	P
40.	4MW20EC043	PRATHVIRAJ	A	P	P	P	P	P	P	P	P	P

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KARNATAKA

41.	4MW20EC044	RAHAMATHUNNI SA	P	P	P	P	P	P	P	P	P	P
42.	4MW20EC045	RAHUL MANJUNATHA POOJARI	P	P	P	P	P	P	P	P	P	P
43.	4MW20EC046	RAKSHA NAYAK	P	P	P	P	P	P	P	P	P	P
44.	4MW20EC047	RAMYA DESHAPANDE	P	P	P	P	P	P	P	P	P	P
45.	4MW20EC048	RASHI	P	P	P	P	P	P	P	P	P	P
46.	4MW20EC049	RIMSHA	P	P	P	P	P	P	P	P	P	P
47.	4MW20EC050	SAGAR ACHARYA	P	P	P	P	P	P	P	P	P	P
48.	4MW20EC051	SANJANA RAO US	P	P	P	P	P	P	P	P	P	P
49.	4MW20EC052	SANKALP R	P	P	P	P	P	P	P	P	P	P
50.	4MW20EC053	SAVEN KUMAR	P	P	P	P	P	P	P	P	P	P
51.	4MW20EC054	SHIVAPRASAD	P	P	P	P	P	P	P	P	P	P
52.	4MW20EC055	SHRAYYA SM	P	P	P	P	P	P	P	P	P	P
53.	4MW20EC056	SHREETA JAYAKAR SHETTY	P	P	P	P	P	P	P	P	P	P
54.	4MW20EC057	SHREYA M TANTRY	P	P	P	P	P	P	P	P	P	P
55.	4MW20EC058	SHRINIDHI DEVADIGA	A	A	A	A	P	P	P	P	P	P
56.	4MW20EC059	SOUMYA C SHETTY	P	A	P	P	P	P	P	P	P	P
57.	4MW20EC060	SOURABH	P	P	P	P	P	P	P	P	P	P
58.	4MW20EC061	SUMANTH	P	P	P	P	P	P	P	P	P	P
59.	4MW20EC062	SUMANTH MUTALIK	P	P	P	P	P	P	P	P	P	P
60.	4MW20EC063	SUMANTH S ACHARYA	P	P	P	P	P	P	P	P	P	P
61.	4MW20EC065	SURAKSHA ACHARYA	P	P	P	P	P	P	P	P	P	P
62.	4MW20EC066	SWASTHIK	P	A	P	P	P	P	P	P	P	P

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63.	4MW20EC067	TANMAY KALKUR	P	P	P	P	P	P	P	P	P	P	P
64.	4MW20EC068	VIKAS VK	P	P	P	P	P	P	P	P	P	P	P
65.	4MW20EC069	VINAYA S	P	P	P	P	P	P	P	P	P	P	P

**Assessment Schedule:**

Date	Module Assessed	Assessment Tool Used
16/11/21	Module 1	Assignment - 1
15/12/21	Module 2	Assignment - 2
6/1/22	Module 3	Assignment - 3

  
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 Vishwothama Nagar, Udupi Dist.  
 BANTAKAL - 574 115

## Assessment Details

Sl No.	USN	Student Name	Module 1 (10M)	Module 2 (10M)	Module 3 (10M)	Total Marks (30M)
1.	4MW20EC002	ABHILASH NAIK	10	10	10	30
2.	4MW20EC003	ABHISHEK	10	10	10	30
3.	4MW20EC004	ACHINTHYA	10	10	10	30
4.	4MW20EC005	ADARSH	10	10	10	30
5.	4MW20EC006	ADARSH P PATIL	10	10	10	30
6.	4MW20EC007	ADITHYA D NAYAK	10	10	10	30
7.	4MW20EC008	ADITHYA PRAKASH	10	10	10	30
8.	4MW20EC010	ANKITHA	10	10	10	30
9.	4MW20EC011	ANKITHA ANNAPPA SHET	10	10	10	30
10.	4MW20EC012	ANUSHA(RAMACHA NDRA)	10	10	10	30
11.	4MW20EC013	ANUSHA(KRISHNA NAIK)	10	10	10	30
12.	4MW20EC014	ANUSHA A R	10	10	10	30
13.	4MW20EC015	ASHISH CHANDRAN	10	10	10	30
14.	4MW20EC016	ASHWINI	10	10	10	30
15.	4MW20EC017	ATHMIKA SHETTY	10	10	10	30
16.	4MW20EC018	AUSTON ANTONY BARBOZA	10	10	10	30
17.	4MW20EC019	HITHA L SHETTY	10	10	10	30
18.	4MW20EC020	JEEVAN KUMAR	10	10	10	30
19.	4MW20EC021	K PREETHIKA KAMATH	10	10	10	30
20.	4MW20EC022	KAZI MOHAMMED NABHAN	10	10	10	30
21.	4MW20EC024	KEERTHANA	10	10	10	30
22.	4MW20EC025	LLOYD WINSTON PINTO	10	10	10	30
23.	4MW20EC026	M DEEPAK ADHIKARI	10	10	10	30
24.	4MW20EC027	MAHIMA V POOJARY	10	10	10	30
25.	4MW20EC028	MANASA ACHARYA	10	10	10	30
26.	4MW20EC029	MANASA GANAPATI BHAT	10	10	10	30
27.	4MW20EC030	MANISH JOGI	10	10	10	30
28.	4MW20EC031	MEDINI SANTHOSH NAIK	10	10	10	30
29.	4MW20EC032	MOOLYA HARSHATHA SADANANDA	10	10	10	30
30.	4MW20EC033	N G SOWJANYA	10	10	10	30

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31.	4MW20EC034	NAGARAJ	10	10	10	30
32.	4MW20EC035	NIKHITHA SHETTY	10	10	10	30
33.	4MW20EC036	NISHA JOSNA DSOUZA	10	10	10	30
34.	4MW20EC037	PAVAN SHETTIGAR	10	10	10	30
35.	4MW20EC038	POOJA	10	10	10	30
36.	4MW20EC039	PRABHU KUMAR	10	10	10	30
37.	4MW20EC040	PRASANNA G SHET	10	10	10	30
38.	4MW20EC041	PRASHA S	10	10	10	30
39.	4MW20EC042	PRATHAM	10	10	10	30
40.	4MW20EC043	PRATHVIRAJ	10	10	10	30
41.	4MW20EC044	RAHAMATHUNNISA	10	10	10	30
42.	4MW20EC045	RAHUL MANJUNATHA POOJARI	10	10	10	30
43.	4MW20EC046	RAKSHA NAYAK	10	10	10	30
44.	4MW20EC047	RAMYA DESHAPANDE	10	10	10	30
45.	4MW20EC048	RASHI	10	10	10	30
46.	4MW20EC049	RIMSHA	10	10	10	30
47.	4MW20EC050	SAGAR ACHARYA	10	10	10	30
48.	4MW20EC051	SANJANA RAO US	10	10	10	30
49.	4MW20EC052	SANKALP R	10	10	10	30
50.	4MW20EC053	SAVEN KUMAR	10	10	10	30
51.	4MW20EC054	SHIVAPRASAD	10	10	10	30
52.	4MW20EC055	SHRAVYA SM	10	10	10	30
53.	4MW20EC056	SHREETA JAYAKAR SHETTY	10	10	10	30
54.	4MW20EC057	SHREYA M TANTRY	10	10	10	30
55.	4MW20EC058	SHRINIDHI DEVADIGA	10	10	10	30
56.	4MW20EC059	SOUMYA C SHETTY	10	10	10	30
57.	4MW20EC060	SOURABH	10	10	10	30
58.	4MW20EC061	SUMANTH	10	10	10	30
59.	4MW20EC062	SUMANTH MUTALIK	10	10	10	30
60.	4MW20EC063	SUMANTH S ACHARYA	10	10	10	30
61.	4MW20EC065	SURAKSHA ACHARYA	10	10	10	30
62.	4MW20EC066	SWASTHIK	10	10	10	30
63.	4MW20EC067	TANMAY KALKUR	10	10	10	30
64.	4MW20EC068	VIKAS VK	10	10	10	30
65.	4MW20EC069	VINAYA S	10	10	10	30

  
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## Attainment

CO	Module	Assessment Tool Used	Bloom's Level	Marks allotted	Total Marks	Weightage	Attainment Level
CO1	1	Assignment	L3	10	10	1	3
CO2	2	Assignment	L3	10	10	1	3
CO3	3	Assignment	L3	10	10	1	3

## Other Information about the course

Target Audience	3 <sup>rd</sup> Semester
Total number of Students enrolled for this course	65
Total Fee collected	10,000
Total number of classes held	30hrs
Portion coverage	100
Student's feedback	-
Expenditure for this course	2000
Details of the e-content developed	-



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Comments/Suggestions by the Course Coordinator

Comment/Observations	Suggested Actions
Students participation were good and learnt some useful skill for their placement point of view	Proposed syllabus can be delivered in 2 phases. In phase 1 focusing only on C and Embedded C portion for 30hrs [ Module 1] In phase 2 focusing only on module 2 and module 3 for 30 hrs

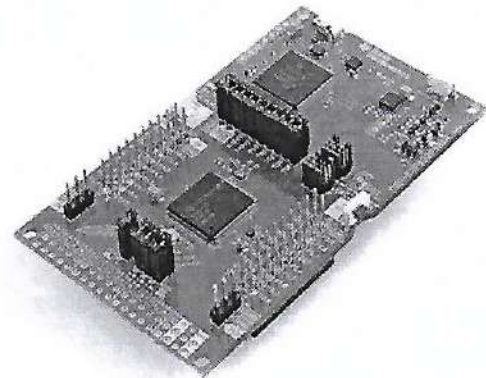
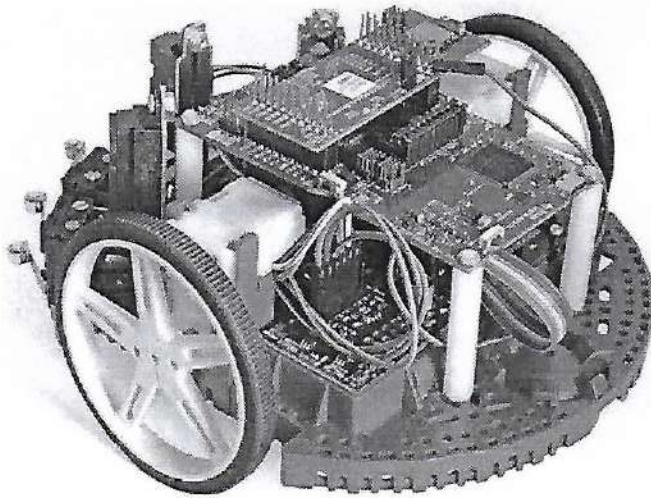
*Anoop*

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## ROBOTIC DESIGN WORKSHOP USING TI RSLK

### Overview:

This workshop offers a neat introduction on the “**Robotic design workshop using TI RSLK**” and is based on the advanced development tools from Texas Instruments. The MSP432 LaunchPad and TI RSLK kit offer a complete Robotic design solution. The programming will be done in the Texas Instruments Energia which will simplify the Robotic applications development. So, what will you **INNOVATE?**



Day	9:30-11:00	11:15-12:45	13:45-15:15	15:30-16:45
1	<b>MSP432 LaunchPad</b> <ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Architecture</li> </ul> <b>LaunchPad Features</b>	<b>Energia Framework</b> Overview of Energia <b>Lab:</b> Led, switch, UART, ADC, PWM Labs using Energia	<b>TI-RSLK Introduction</b> Introduction to TI-RSLK Brief on Bluetooth Technology	<b>Robotic kit Assembling</b> <b>Lab:</b> Assembling and soldering the components for running the Robot.
2	<b>Mobile Application</b> <b>Lab:</b> Configuring the mobile application to control the robotic vehicle.	<b>Lab:</b> Controlling the RSLK using Mobile application.	<b>Voice Controlled Robot</b> <b>Lab:</b> Controlling the robot using voice commands	Continued.... <b>Lab:</b> Controlling the robot using voice commands
3	<b>Neuro Sens band</b> <b>Lab:</b> Controlling the RSLK using neuro senz band.	<b>Obstacle detection Robot</b> <b>Lab:</b> Interfacing Ultrasonic sensor and printing the sensor values on Serial Monitor	<b>Obstacle detection Robot</b> <b>Lab:</b> Implementing a Robot which will stop when it detects any obstacle.	Assignments and Questions

## ROBOTIC DESIGN WORKSHOP AT SMVITM BANTAKAL

The department of E&C Engineering, in association with ISTE Student Chapter and EdGate Technologies Pvt. Ltd. Bengaluru, organized a three days hands-on workshop on "Robotic design using TI RSLK" from 3 to 5 October 2019 in the institute premises. Sixty eight students participated in this Texas Instruments University certified workshop and enriched their knowledge and skills. Senior Application Engineer Mr. T. S. Balaji and Embedded Systems Engineer Mr. R. Bharath from EdGate conducted the workshop.

The workshop was designed for students who want to sharpen their design and development skills on MSP tools and was based on the advanced development tools from Texas Instruments such as TI-RSLK kit and TI Energia software. During the workshop, the students designed and implemented many applications the robotic kits such as controlling a robotic vehicle using Bluetooth technology, mobile phone, voice commands, neuro senz band, and detection of obstacles using ultrasonic sensor.

Earlier, Associate Professor and Coordinator of the program Mr. Nagaraja Rao welcomed the resource persons and briefed about the objectives of the workshop. Vice Principal Dr. Ganesh Aithal advised the students to make the best use of the workshop and come out with products that are useful to the society. Head of the department Dr. Balachandra Achar proposed the vote of thanks.

### ಎಸ್.ಎಮ್.ವಿ.ಐ.ಟಿ.ಎಮ್. ಬಂಟಕಲ್‌ನಲ್ಲಿ ರೋಬೋಟಿಕ್ಸ್ ಡಿಸೈನ್ ಕಾರ್ಯಾಗಾರ

ಬಂಟಕಲ್ಲಿನ ಶ್ರೀ ಮಧ್ವ ವಾದಿರಾಜ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯದ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್ ಮತ್ತು ಕಮ್ಯುನಿಕೇಶನ್ ವಿಭಾಗದಲ್ಲಿ ಬೆಂಗಳೂರಿನ ಎಡ್-ಗೆಟ್ ಟೆಕ್ನಾಲಜೀಸ್‌ನ ಸಹಭಾಗಿತ್ವದಲ್ಲಿ ಅಕ್ಟೋಬರ್ 3ರಿಂದ 5ರ ತನಕ ರೋಬೋಟಿಕ್ಸ್ ಡಿಸೈನ್ ಕಾರ್ಯಾಗಾರವನ್ನು ನಡೆಸಲಾಯಿತು. ಅಮೇರಿಕಾದ ಟೆಕ್ಸಾಸ್ ಇನ್‌ಸ್ಟಿಟ್ಯೂಟ್‌ನಿಂದ ಪ್ರಮಾಣೀಕರಿಸಲ್ಪಟ್ಟ ಈ ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಕಾಲೇಜಿನ 68 ಮಂದಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಭಾಗವಹಿಸಿ ತಮ್ಮ ಕೌಶಲ್ಯವನ್ನು ವೃದ್ಧಿಸಿಕೊಂಡರು. ಎಡ್-ಗೆಟ್‌ನ ಇಂಜಿನಿಯರ್‌ಗಳಾದ ಶ್ರೀ ಟಿ.ಎಸ್. ಬಾಲಾಜಿ ಮತ್ತು ಶ್ರೀ ಆರ್. ಭರತ್ ಅವರು ಈ ಕಾರ್ಯಾಗಾರವನ್ನು ನಡೆಸಿಕೊಟ್ಟರು. ಮೊಬೈಲ್ ಫೋನ್, ಬ್ಲೂಟೂತ್, ಡ್ವನಿ ಮತ್ತು ಮೆದುಳಿನ ಸಂಜ್ಞೆಯ ಮೂಲಕ ರೋಬೋಟಿಕ್ ವಾಹನವನ್ನು ನಿಯಂತ್ರಿಸುವುದು, ಮತ್ತು ದಾರಿಯಲ್ಲಿ ಅಡಚಣೆಗಳಿದ್ದರೆ ಅವನ್ನು ಅಲ್ಟ್ರಾಸಾನಿಕ್ಸ್ ಮೂಲಕ ಪತ್ತೆಹಚ್ಚುವುದು, ಇವೇ ಮೊದಲಾದ ಕಾರ್ಯತಂತ್ರಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳು ಈ ಕಾರ್ಯಾಗಾರದಲ್ಲಿ ಕಲಿತುಕೊಂಡರು.

ಕಾಲೇಜಿನ ಸಹಪ್ರಾಧ್ಯಾಪಕರೂ ಮತ್ತು ಕಾರ್ಯಕ್ರಮದ ಸಂಯೋಜಕರೂ ಆದ ಶ್ರೀ ನಾಗರಾಜ ರಾವ್ ಅವರು ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳನ್ನು ಸ್ವಾಗತಿಸಿ ಕಾರ್ಯಾಗಾರದ ಉದ್ದೇಶಗಳನ್ನು ತಿಳಿಸಿದರು. ಕಾಲೇಜಿನ ಉಪಪ್ರಾಂಶುಪಾಲರಾದ ಡಾ. ಶ್ರೀ ಗಣೇಶ ಐತಾಳ್ ಮತ್ತು ವಿಭಾಗ ಮುಖ್ಯಸ್ಥರಾದ ಡಾ. ಶ್ರೀ ಬಾಲಚಂದ್ರ ಆಚಾರ್ಯರು ಉಪಸ್ಥಿತರಿದ್ದು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರೋತ್ಸಾಹಿಸಿದರು.

Principal

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Chetan R ECE &lt;chetan.ec@sode-edu.in&gt;

**Students Assignment using MSP 430: LUNCH BOX kit**

2 messages

Chetan R ECE &lt;chetan.ec@sode-edu.in&gt;

Thu, Jun 2, 2022 at 3:10 PM

To: sandeepkr.ec@sode-edu.in, Girish H ECE &lt;girish\_bhat.ec@sode-edu.in&gt;, madhuthantry.ec@sode-edu.in

Cc: HOD ECE &lt;ec@sode-edu.in&gt;

Dear Sir,

I would like to inform you that, in the Embedded System subject (which I am handling currently for 6th Semester students), I have asked the students to conduct experiments using the MSP430 Lunch box kit. In this direction students may come to you and ask for the kit. Please provide the kit and let them conduct the experiment in the lab only, don't allow them to take the kit with them and maintain the proper record of issuing and returning it.

--

Thanking you

Best Regards

**Mr. Chetan.R**

Asst. Professor(Sr.),

ECE Dept.

SMVITM Bantakal, Udupi

Mb:9986197796

Madhusudhan Thantry P N ECE &lt;madhuthantry.ec@sode-edu.in&gt;

Thu, Jun 2, 2022 at 3:46 PM

To: Chetan R ECE &lt;chetan.ec@sode-edu.in&gt;

Ok sir .

[Quoted text hidden]

A handwritten signature in green ink, appearing to read 'Inscop', with a horizontal line underneath.

Principal

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## SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

A Unit of Shri Sode Vadiraja Mutt Education Trust (R), Udupi

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### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Dr. H. V. Balachanddra Achar,  
Head, ECE  
SMVITM, Bantakal

05 October 2019

M/s EdGate Technologies Pvt Limited  
479, 6<sup>th</sup> main, HMT layout,  
Opp BMTC depot, R.T.Nagar,  
Bangalore -560032

**Sub: Student Development program on Robotics Systems Design with Brain Wave Technology**

Dear Sir,

On Behalf of **Shri Madhwa Vadiraja Institute of Technology and Management, Udupi**, I acknowledge that **EdGate Technologies Pvt Ltd Bengaluru (Texas Instruments University Program India)** has organized **3-Days Student Development program** on “Robotics Systems Design with Brain Wave Technology” from **3<sup>rd</sup> Oct to 5<sup>th</sup> Oct, 2019** in the department of Electronics and Communication Engineering. The session was conducted by resource persons **Mr. Balaji T S & Mr. Bharath R.** The Program was attended by 68 students.

We thank you for the same.

Thank You,  
With Regards,

Dr. H. V. Balachandra Achar

Principal

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