TI workshop on DSP (TI Launch pad LAUNCHXL-F28027F and Pulse Width Modulation) 23-24 December 2016

1. **Title of the activity:** TI workshop on DSP (TI Launch pad LAUNCHXL-F28027F and Pulse Width Modulation)
2. **About the activity:**
    a. **Objective:**

This workshop offered a neat introduction on the C2000 product family and is based on the advanced development tools from Texas Instruments, the F28027 LaunchPad and the DRV8301 BoosterPack.
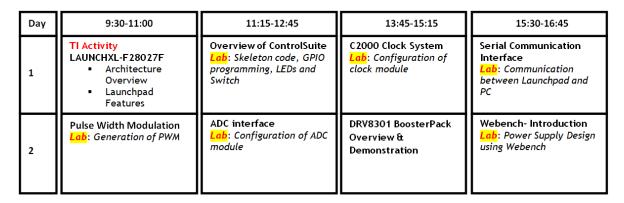
   b. **Program detail:**

Embedded club (driven by department of ECE) has conducted 2 days workshop on DSP processor (Piccolo C2000) of texas Instruments on 23-24 December 2016. The workshop was attended by 38 ECE, CS & EE faculty members. It was sponsored by texas instruments, bangalore. For development of the students, a 7 week course on Raspberry pi board is being organized as a Wednesday activity which will finish in April 17 with its task based training (TBT) of 4 weeks. Two student teams are participating in this TBT. The activities are running in TI innovation Lab and incubation cell area of SKIT.   The Executive from TI visted the college to deliver the contents.

This workshop offered a neat introduction on the C2000 product family and is based on the advanced development tools from Texas Instruments, the F28027 LaunchPad and the DRV8301 Booster Pack. The Major Topics: Introduction to MSP430, Features, Architecture , (Register SET), Memory Mapping, Peripherals, LOW POWER MODES & INTERRUPTS Introduction- MSP430G2553 Launch Pad Introduction to Code Composer Studio V5 , LED, SWITCH AND DE BOUNCING , Generate delay B using on chip WDT. R , Generate 1s delay using TIMER A. E , 16X2 LCD interface, Stepper motor interface B, Configuration of On-chip Temperature sensor ; Introduction to ENERGIA ; Digital & Analog Lab on Energia (LEDs, PWM, Potentiometer, Temperature Sensor, UART); GRACE based LAB The workshop was attended by 38 ECE, CS & EE faculty members.

   c. **Expected Outcome:**

To Get started with the C2000 piccolo LaunchPad and dive into real-time, closed loop control development with the C2000-32 bit microcontroller family.

     d. Type: National
3. **Details of the Activity:**

     a. **Resource person (External):** The Executive from TI (Texas Instruments)
     b. **No of participants:** 40
     c. **Brief Proceeding of each day of the activity:**

Day	9:30-11:00	11:15-12:45	13:45-15:15	15:30-16:45
1	**TI Activity** LAUNCHXL-F28027F • Architecture Overview • Launchpad Features	Overview of ControlSuite *Lab: Skeleton code, GPIO programming, LEDs and Switch*	C2000 Clock System *Lab: Configuration of clock module*	Serial Communication Interface *Lab: Communication between Launchpad and PC*
2	Pulse Width Modulation *Lab: Generation of PWM*	ADC interface *Lab: Configuration of ADC module*	DRV8301 BoosterPack Overview & Demonstration	Webench- Introduction *Lab: Power Supply Design using Webench*

     d. **Attainment of the activity:** The desired objectives were attained

4. **Enclosures**
     a. **Brochure:** NIL
     b. **Souvenir:** NIL
     c. **Proceedings:** NIL
     d. **Photographs**

Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur

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S.N	Name of Participants	Attendance
1	Ankit Agarwal	Present
2	Dr. Monika Mathur	Present
3	Dr. Rukhsar Zafar	Present
4	Dr. Swati Arora	Present
5	Gloria Joseph	Present
6	Harshal Nigam	Present
7	J p Vijay	Present
8	Kiran Rathi	Present
9	Lalit Lata	Present
10	Mamta Jain	Present
11	Manju Choudhary	Present
12	Namrata Joshi	Present
13	Neeraj Jain	Present
14	Pallav Rawal	Present
15	Pankaj Soni	Present
16	Pooja Choudhary	Present
17	Rahul Pandey	Present
18	Rajni Idiwal	Present
19	Ravi Jangir	Present
20	Shubhi Jain	Present
21	Vinod Kataria	Present
22	Sarabjeet Singh Sethi	Present
23	Shanu Tripathi	Present
24	Vinay Kanungo	Present
25	Ankit Kumar	Present
26	Yogesh Soni	Present
27	Yamini Rathore	Present
28	Harshit Mathur	Present
29	Divya Rahtore	Present
30	Ankita Sharma	Present
31	Ashmita Menariya	Present
32	Ila Roy	Present
33	Vivek Jaimini	Present
34	Anil Kumar Verma	Present
35	R S Ola	Present
36	Sunil Acharya	Present
37	Prema Ram	Present
38	Renu	Present
39	Seema Bhati	Present
40	Dhurendra Singh	Present