



VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

Founder President Late Padmashri H. G. Vartak
(Approved by AICTE and Affiliated to the University of Mumbai)
Four Branches Permanently Affiliated by University of Mumbai

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Memorandum of Understanding

Vidyavardhini's College of Engineering and Technology, Vasai

Date: 19th November, 2018

Texas Instruments Innovation Center (A partner of Texas Instruments India University Program)

1. Introduction

India has become a promising investment destination for foreign companies looking to do business here. Our Honorable Prime Minister of India has launched the '*Make in India*' initiative with the aim to give the Indian economy global recognition. This initiative is expected to spur development, economical growth and thereby improving the living standard of Indian Citizen.

Engineering education has to play very important role in providing huge pool of skilled and knowledgeable, and industry ready engineers. The future success of Indian industry depends on the growth of quality engineering education in India, especially since Indian industry is competing globally in areas such as software and hardware electronics, automobiles, pharmaceutical, chemicals, engineering equipment etc. In India, the brightest students opt for engineering after the 12th standard. This has resulted in a spurt of engineering colleges. However, the reality is that only a very small percentage of these students are readily employable (@25% or less as per the survey by Nasscom) and most lack industry specific skills. In order to bridge this gap between the academia and the industry and to ensure ready deployment in regular work streams, structured industry specific training is necessary.

2. Brief Introduction about Vidyavardhini's College of Engineering and Technology, Vasai.

Vidyavardhini means a Body committed to enhancement of Knowledge. Vidyavardhini was established as a registered society in 1970 by late Padmashri H. G. alias Bhausaheb Vartak for the noble cause of education in rural areas.

Vidyavardhini Society received approval from AICTE to start the new college of Engineering & Technology with effect from July, 1994. The college is affiliated to the University of Mumbai for the four year degree program leading to the degree of Bachelor of Engineering.

The Department of Electronics and Telecommunication Engineering (EXTC) was established along with the college in the year 1994 with intake 60 and is known to provide best academic facilities across University of Mumbai. The Course is accredited by National Board of Accreditation (NBA), New Delhi for three years wef 2012.



3. Brief Introduction about EdGate Technologies Private limited

EdGate Technologies Private Limited are Texas Instruments India University Program Partners. EdGate has an extensive presence all over the country and well established connectivity within the academic and corporate communities. Our aim is to reach out to the Corporate, educators and the engineering student community to help them achieve more in their research and their learning initiatives.

Services offered to Universities under Texas Instruments India University Program

- Presales Guidelines
- Sales and Continuous Post Sales support
- Installation and Training
- Train the Trainer Program (Customized)
- Seminar/Workshop (Customized)
- Faculty Development programs (Customized).

EdGate has setup Texas Instruments Labs in various Engineering colleges across India. EdGate has signed 150 + MOU's and 25 TIIC's with Engineering colleges under Texas Instruments University Program

EdGate Technologies provide a whole range of services by leveraging its business expertise by strategic alliances with leading technology providers & are Sole authorized distributors of following Partners

- Mango Communication, USA : Mango has its roots in the Rice University Wireless Open-Access Research Platform (WARP) project, originally an NSF-funded research project that has grown into a self-sustaining open-source wireless research platform.
- SoftDB, Canada (Texas Instruments – Third party developer)
- Technosoftmotion, Switzerland (Texas Instruments – Third party developer)
- Next Dimension Technology, Korea (Texas Instruments – Third party developer)
- Rowley Associates, United Kingdom
- Embest Technology Co Ltd, China (Texas Instruments – Third party developer)
- Zeeis, China (Texas Instruments – Third party developer)
- Link Research, USA (Texas Instruments – Third party developer)

Texas Instruments University Program

The TI University Program is the intersection between TI technology, educators and the engineers of tomorrow. Our advanced analog and embedded processing technologies fuel the passions of students and educators in university labs worldwide. Established in 1982, the TI



University Program is a global program dedicated to supporting educators, researchers and students in facilitating the inclusion of TI analog and embedded processing in engineering classrooms, teaching and research labs, textbooks, design projects and course curriculum. By building relationships with educators, TI works to bridge the gap between the business and academic world. Incorporating TI technology into curriculum provides educators with the ability to teach real world concepts and complement this with a unique hands-on learning experience utilizing TI tools, making it more exciting, relevant and valuable to the student. Working with TI increases the knowledge base of future engineers so they interact with industry-standard technology before they graduate. TI helps develop the skills needed to tackle tomorrow's most challenging problems. By providing students access to the largest and most advanced analog and embedded processing portfolio, the TI University Program provides the tools necessary to inspire innovation and take engineering concepts from the book to the breadboard.

1. **Contribution and Expectation of EdGate Technologies under Texas Instruments India University Program**

As on-ground deliverables, EdGate Technologies will provide the following:

- a) **Curriculum:** EdGate will provide the Curriculum for Texas Instruments Labs . Vidyavardhini's College of Engineering and Technology, Vasai should find ways to incorporate curriculum in there syllabus.
- b) **Lab Setup:** The College will set up a lab as Centre of Excellence which will be entitled "Texas Instruments Innovation Lab " at its premises.
- c) **Faculty Development Program:** College Name will organize at least one faculty development program in its premise for its faculty members and faculty members of other Indian engineering institutions to teach TI Platform. The College will provide the infrastructure facility for conducting the faculty development program. EdGate Technologies Pvt Limited will help the college in conducting this program.
- d) **Workshops/Events:** If the College wishes to organize a national event in the area of TI Platform, EdGate Technologies Pvt limited will provide speakers.
- e) **Training Programs:** EdGate Technologies Pvt Limited will assist the college in organizing training programs/tutorials on topics related to TI Platform. Faculty members from the college who have undergone train-the-trainer program and who are certified by EdGate Technologies Pvt Limited as trainers may run certified training programs. College Name will provide certificates for the participants of such programs.(Valid for 1 year only). After 1 Year college can print the Certificates & Send to EdGate Technologies Pvt Ltd for approval.
- f) **TI Lab Engagement Program:** EdGate Technologies Pvt. Limited will help the College Name to get engaged into the TI Innovation Center Labs under this program



over a period of 3 months at three different levels i.e., Basic, Intermediate and Advanced.

- g) Under TI Lab Engagement Program, Vidyavardhini's College of Engineering and Technology, Vasai in association with EdGate Technology Pvt. Limited, may organized and conduct Summer/Winter Training Program for the students from all the nearby engineering institutes along with students from there college by charging moderate fees. EdGate Technologies will provide experts for such program on subsidies charges. EdGate will certify those students.
- h) In future if college wishes to upgrade lab with new tools. EdGate will provide university discounted price.

2 Contribution from Vidyavardhini's College of Engineering and Technology, Vasai

Faculty Mentor: Qualified Faculty of Electronics & Communication Engineering, Instrumentation & Control Engineering, Biomedical Instrumentation, Computer Engineering, and Information Technology (preferably with programming knowledge on C; C++) will be made point of contacts and will mentor interested students.

Vidyavardhini's College of Engineering and Technology, Vasai should set up lab based on below:

Sr. No.	Item	Quantity	Cost
	Cost of Texas Instruments Innovation Center: Below items will be delivered	Below Package	4.6 LAKHS
1.	ROBOTICS ADVANCE CONTROL AND IOT		
A	Robotics System Lab Kit	10	
B	Senzband with Mind Sync and Memorie App	3	
C	RSLK compatible sensors and Bluetooth Module	3 Set	
a	PIR sensor		
b	HM-10 Bluetooth module		
C	ultrasonic sensor		
D	Servo motor		
E	moisture sensor		
F	buzzer		
G	Dedicated Edgate Apps for RSLK		



2.	Analog Attach MCU Labs (ARM)/Embedded Lab: A secondary Element that attached to Micro controller Lab		
A	CC110L Booster pack	2	
B	TIVA TM4C123G Launch pad	5	
C	Sensor Hub Booster Pack	2	
3.	Connectivity Attach Lab (Ultra Low Power Lab/Internet of Things Lab (IOT)) : A secondary Element that attached to Micro controller Lab Or stand alone solution focusing on connectivity		
A	Ez430RF-2500 MSP430 Wireless Development Tools	2	
B	BOOSTXL-CC2650MA	2	
C	Simple Link Wi-Fi CC3100 Booster Pack	2	
D	CC3220SF-LAUNCHXL Wi-Fi Launch pad	2	
E	MSP430F5529 USB Launch pad Evaluation Kit	4	
H	Sensors: Sound Sensor 3-Axis Accelerometer Ultrasonic Sensor Electret Microphone Water Sensor Temperature Sensor Light Sensor	1 Each	
4	DSP Lab:		
A	TMS320C6748 LCDK with XDS 100v3 Emulator	3	
B	Camera	1	
c	OMAP L138 DSP kit	1	
5	Training for Faculty(Covering all the above kits and tools)	3 Days	
6	Training to students(IOT Training) : Registration Material to all participants (Pens, Pads, Folders)- Internet facility is must for workshop, Certificate to all participating students	50- students/ 20 – faculty (3 Days for students)	
7	Training to students : In Semester II	50-students (3 Days for students)	
7	TI Lab Poster and TI Lab Signage(Branding	1 Set	



Material)		
Terms and Conditions :		
1. Payment:	100% Payment after delivery.	
2. Warranty:	1 Year	
3. Validity:	TIIC Agreement is perpetual and Training agreement is valid for one year only	
4. Taxes:	GST @18%	

- a) Center: Institute will identify and maintain Texas Instruments Innovation Center with at least 10 desktops / laptops on latest home/ office configuration.
- b) Peripheral components: Institute will make arrangement for other equipment required for setting up the lab and for the maintenance of the lab.
- c) Financial: Institute will operate the center with the help of existing staff.

Vidyavardhini's College of Engineering and Technology, Vasai – Texas Instruments Innovation Center (TIIC)

EdGate Technologies aimed at establishing a collaborative bridge between companies and colleges with the objective of making students in the Engineering Colleges and Schools have a greater hands on experience in technologies related to :-

- a. Embedded systems
- b. Ultra Low Power Applications
- c. Analog System Design
- d. Internet of Things (IOT)
- e. Robotic lab
- f. DSP

These programs would go a long way to get the students hands on project experience in state of the art Micro-controller boards which are being developed by Texas Instruments. The experience will include hands on software and hardware skills which are highly desired by industry. These projects will provide an experiential appreciation of the latest technologies giving the students significant edge across multiple dimensions like, knowledge, enhanced employability, project experience, etc.

Vidyavardhini's College of Engineering and Technology, Vasai – TIIC will bring in the following core values:-

Colleges:

- Analog System Design Lab using ASLK PRO



- Ultra Low power Microcontroller Lab
- Internet of Things technology is based on the traditional Internet technology, development and extension, due to its extremely wide range of applications, involving almost all walks of life, and therefore in order to meet the needs of industry professionals, a growing number of colleges and universities applied for Internet of Things engineering professional, in teaching programs arranged in Internet of Things technology courses.
- Strong Branding and ability to attract better quality students
- Better ranking amongst the competition

Students:

- Exposure to state of the art technologies through hands on learning experience
- Better employability opportunities
- Showcase talent and innovation
- Participating in Texas Instruments Innovation Challenge.(If Texas Instruments conducts any contest centre will be connected with the same)

Vision forward

Texas Instruments hopes that once these Innovation centres are in place and running, If Texas Instruments conducts any contest centre will be connected with the same.

Restrictions and Obligations Governing the Use of Confidential Information and Materials

- Recipient shall not disclose any Confidential Information/Confidential Material, to third parties without the prior written authorization of the Company. Notwithstanding the foregoing, the Recipient shall not at any time disclose to any third party any Confidential Information/Confidential Material or any Confidential Information of any other party to whom the Company owes an obligation. However, the Recipient may disclose Confidential Information in accordance with judicial or other governmental orders, provided the Recipient shall give the Company reasonable notice, prior to such disclosure and shall comply with any applicable protective order or equivalent.
- The Recipient shall not use any Confidential Information or Confidential Materials of the Company for any purposes except those expressly contemplated hereby or as authorized by the Company.




- c) The Recipient shall take reasonable security precautions, which shall in any event be as great as the precautions it takes to protect its own confidential information, to keep secure the Confidential Information.
- d) Recipient agrees to segregate all such Confidential Materials from the confidential materials of others to prevent co-mingling.

Rights and Remedies

Recipient shall notify the Company immediately upon discovery of any unauthorized use or disclosure of Confidential Information or Confidential Materials, or any other breach of this Agreement by Recipient, and will cooperate with the Company in every reasonable way to help the Company regain possession of the Confidential Information and/or Confidential Materials and prevent further unauthorized use or disclosure.

For Vidyavardhini's College of Engineering and Technology, Vasai


Principal.
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VIDYAVARDHINI'S COLLEGE
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Director



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