ELECTRONICS ENGINEERING DEPARTMENT

SOCIETY FOR ELECTRONICS EXPLORATION & DEVELOPMENT

SEED

SOCIETY FOR ELECTRONICS
EXPLORATION AND DEVELOPMENT

2017-2018

DEPARTMENTAL MAGAZINE

AND

ANNUAL REPORT

INSTITUTE OF ENGINEEERING AND TECHNOLOGY, LUCKNOW

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
INSTITUTE OF ENGINEERING AND TECHNOLOGY, LUCKNOW

VISION

To produce manpower in the field of Electronics and Communication Engineering, capable to compete with that elsewhere and to make the department a center of excellence in the field of Signal Processing and Microelectronics.

MISSION

M1:To develop the ability among students and understand concepts of core graduate electronics and communication engineering.
M2:To create center of Excellence to meet global research and development challenges.
M3:To build student community with professional and ethical standards in thrust areas so as to meet industry requirements.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1:Graduates of the programme will have an educational experience that inspires them to exhibit leadership and team building skills and have successful careers in their chosen technical or professional domain.

PEO2:Graduates of the programme will continue to learn and adapt in a constantly evolving society and contribute to the society in a professional and ethical manner.

PEO3: Graduates of the programme will inculcate good technical and professional knowledge according to requirements of industries and higher studies.

PEO4: To inculcate the spirit of innovation / creativity, independent thinking, risk taking ability, entrepreneurship and attitude to approach challenges with confidence.

PROGRAM SPECIFIC OBJECTIVES (PSOs)

PSO1: **An** ability to understand the concepts of basic Electronics & Communication Engineering and to apply them to various areas like Signal processing, VLSI, Embedded systems, Communication Systems, Digital & Analog Devices, etc.

PSO2: **An** ability to solve complex Electronics and Communication Engineering problems, using latest hardware and software tools, along with analytical skills to arrive cost effective and appropriate solutions.

PSO3: **Wisdom** of social and environmental awareness along with ethical responsibility to have a successful career and to sustain passion and zeal for real-world applications using optimal resources as an Entrepreneur.

FROM HOD'S DESK

The department of Electronics Engineering of our college got established in the year 1984. Over the last three decades, we have developed our expertise and competence in the core Electronics engineering curriculum and research. The department put forward undergraduate programme in Electronics and Communication Engineering and Electronics and Instrumentation Engineering, along with this post-graduate programmes. The department aims at imparting technical knowledge of the subjects through a balanced blend of coursework and project.Our department endows students with the ability to apply knowledge effectively in multidisciplinary team,aims at providing leadership and technical expertise and imparts knowledge with ethical approach and concern to build a better tomorrow.

Highly qualified faculty members with surplus credentials conjointly work with unceasing efforts for our students.They help them to learn, grow and develop, thus preparing them to meet the demands of highly competitive global industrial market.

-Prof. (Dr.) Subodh Wairya
Head of Electronics Engg. Dept.

ABOUT IET

The IET was established by the government of U.P. in 1984, for imparting engineering education and for promoting technological research to generate suitable technical manpower.

Established in1984, it marked the genesis of an academia, the pursuit of research, education, scholarship, and thus the odyssey had begun.

The attitude to face competition and succeed goes similarly, for other fields as well, be it setting benchmarks and bringing laurels in cultural, technical and sports events across the country. Credit of which goes to the various teams active in the college,thereby providing an overall development.

Growing from strength to strength and been recognised as an inimitable college of North India, the institute today is a leading established in the field of education and research. Also, IET is reinstated with the best scholars and professors of the state, acquiring numerous laurels under its name since entactment.

ABOUT ANKURAN

Society of Electronics Exploration and Development (SEED) presents to you ANKURAN - the perfect junction where technicality meets culture and creativity. 'Ankuran' which translates to germination is the annual fest of Electronics Department which aims at sowing the seed of curiosity and germinating creativity.

Ankuran is the annual fest that is presented by SEED society and witnesses mass participation across the college, irrespective of year or branch. This fest teaches us how we are linked to each other, what are the importance of trade that we choose, the true sense of co-curriculum activities, and the real spirit of community learning.

If you feel this is just the nerdy stuff, don't feel left out, we present to you a whole new fusion of an unseen festival ... ANKURAN where we blend rhythms of hearts and frequencies of our microprocessors, where we blend dance beats and computer bits, where we blend fashion show ramp and Robot walk.

If you like to give orders, if you like to flaunt your skills, if you like to raise the heat, then THIS IS THE FEST YOU HAVE BEEN WAITING FOR. Create your own robots and instruct them while they follow, build robots and get them on the football arena, enter automation, present your researches in technical paper presentations, you can also get a chance to get them published and add a feather to your hat.
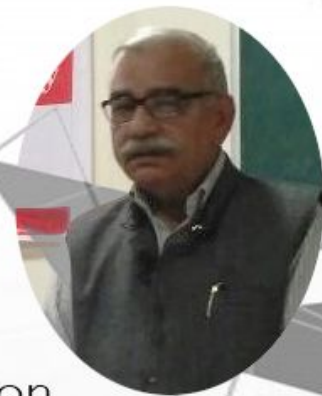
So brace yourself to become a part of the 'WORLD ANKURAN'.

FROM THE FOUNDER'S DESK

Welcome to the Society of Electronics Exploration and Development (SEED). The society aims to sow the seed of curiosity within each student who wishes to revolutionise the technology and is ready to transcend the frontiers of knowledge, along with what's within.

The vision was to link our technical theoritical curriculum to practical applications. The society provides a platform for each student to have a hands-on knowldege of science along with practical implementation of their curriculum. The society designs and presents tasks that challenge the student's mind to bring out the hiddden creative ideas. The ideas which lead the human sociewty towards a better tomorrow. The society provides a perfect channel for the creative minds to put forward the revolutionising ideas and create a perfecty blend of innoavtion and research that finds its application in the real world. This contributes to the overall development of the students.

"The real problem is not whether machines think but whether men do", the society provides that opportunity and platform along with guidance to make you think out of the box. To utilise the theoritical knowldege in the practical world. With the clear vision of being able to use knowldege for better creative technological advancement for a better tomorrow I hope the society helps you bring out the real Engineer in you.

-Prof.(Dr.) V.K Singh
Electronics Engg. Dept.

EXECUTIVE COMMITTEE

Following students of III year have been nominated as the members of Executive Committee of SEED for the session   2017-18

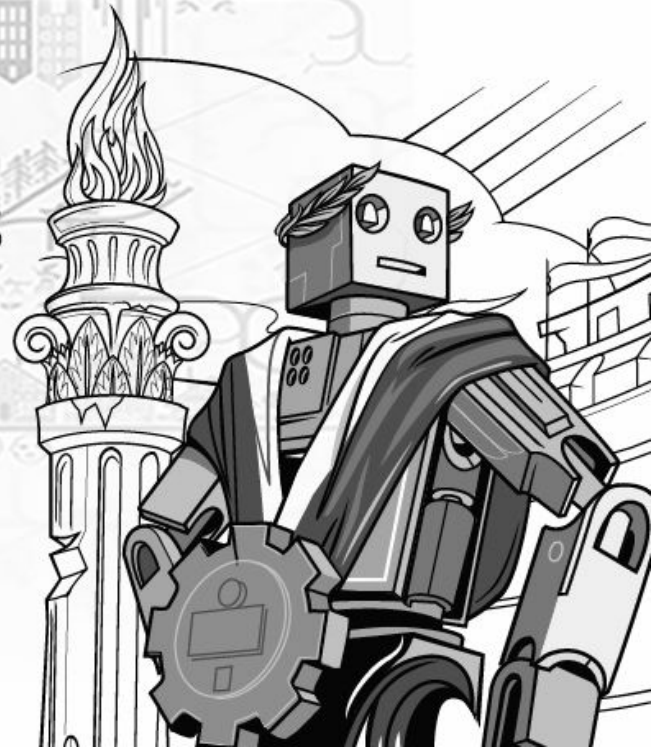| SR.NO.	NAME	BRANCH	POST
1.	DEEPAK SHARMA	E.C.	Co-ordinator
2.	ANUSHKA AWASTHI	E.I.	Co-ordinator
3.	ASHISH RAIKWAR	E.C.	Dy. Coordinator
4.	CHANDAN JAISWAL	E.C.	Dy. Coordinator
5.	KIRTI KUSMAKAR	E.I.	Dy. Coordinator
6.	PALAK AGRAWAL	E.C.	Dy. Coordinator
7.	SUJATA GUPTA	E.C.	Member
8.	ANKUR SINGH	E.C.	Member
9.	PRANAV GARG	E.C.	Member
10.	HARSHIT KATIYAR	E.I.	Member
11.	SHUBHAM YADAV	E.C.	Member
12.	ASHUTOSH DWIVEDI	E.C.	Member
13.	RAHUL GOLA	E.C.	Member
14.	SHRETIKA JAIN	E.C.	Treasurer

ROBO GAMES

A-MAZE-IN
AUTONOMOUS ROBOTICS COMPETITION

LEGO SOCCER
PLAY SOCCER USING ROBOTS

ROBO-TERRAIN
OBSTACLES RACE BY USING MANUAL ROBOTICS

INFORMALS

THE BINGO ZONE

musically

Treasure Hunt

I NEVER BLUFF

SUDOKU

POKER

BE THE BUZZ......

and many more....

TEXPERIA EVENTS

GAME OF DRONES

In India,there are great followers of GOT(Game of Thrones) and Roadies and what a thrill arises when both come together.

RTT (RIGHT TO TROLL)

Everyone has atleast one guy their life who is jealous of him and this is the best stage and best opportunity to make him quite and show your status to him.

STREET SOCCER

Everyone knows soccer and everyone knows how to play soccer.But here some interesting factors are also included which can create interest in those who don't know other than Messi and Ronaldo.

60 SECONDS TO FAME

Life gives only few moments in which you live without any fear and speak what you want without any hesitation.This is the stage where everyone is free to say anything to anybody.Don't lose it.

ANKURAN 2017

SEED
ANKURAN

400 मेधावी छात्राओं को मेडल व प्राइज से नवाजा

लखनऊ (ब्यूरो)। लामार्ट गर्ल्स कॉलेज में शुक्रवार को कार्यक्रम की मुख्य अतिथि इन्कम टैक्स की निदेशिका ई प्रतिभा का शानदार प्रदर्शन करने वाली छात्राओं को मेडल

रोबोट ने दागे गोल और भूल- भुलैया से निकले बाहर

अमर उजाला ब्यूरो
लखनऊ।

इंस्टीट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी (आईईटी) के इलेक्ट्रॉनिक्स विभाग का वार्षिक टेक्निकल फेस्ट 'अंकुरण' में शुक्रवार को रोबोट के बीच हुए फुटबॉल गेम ने काफी आकर्षित किया। वाइल्ड शॉकर प्रतियोगिता के तहत लोहे के बने अस्थाई ग्राउंड में रोबोट ने फुटबॉल खेला और गोल भी दागे। पहले दिन का आकर्षण मेज रनर प्रतियोगिता रही, जिसमें रोबोट को भूल-भुलैया से बाहर निकालना था। इसमें अंतिम वर्ष के छात्र-छात्राओं द्वारा की गई कोडिंग से जल्दी बाहर निकलने वाले रोबोट वाली टीम को विजयी घोषित किया गया। इससे पहले सुबह विभागाध्यक्ष प्रो. सुबोध वैरिया ने फेस्ट का उद्घाटन किया और विद्यार्थियों को शुभकामनाएं दी। कार्यक्रम में सस्टेनिंग स्ट्रक्चर विषय पर तकनीकी पत्र का

प्रदर्शन भी किया गया। फेस्ट के लिए विभाग को ललित कला के विद्यार्थियों द्वारा आकर्षक ढंग से सजाया भी गया था। कार्यक्रम में फर्स्ट ईयर के स्टूडेंट्स को रोबोट बनाने से लेकर उनके विद्युतीय परिपथ की पूरी जानकारी भी सीनियर्स ने दी। फेस्ट में आईईटी के साथ इंटीग्रल यूनिवर्सिटी, श्रीराम स्वरूप मेमोरियल यूनिवर्सिटी, बाबू बनारसी दास विश्वविद्यालय के स्टूडेंट्स भी शामिल हुए। फेस्ट के दूसरे दिन शनिवार को रोबो सूमो, कोड रेस, रोबो सेविवर, टेक टॉक का आयोजन किया जाएगा।

रोबो फाइट ने किया सबको रोमांचित

लखनऊ (ब्यूरो)। इंस्टीट्यूट ऑफ इंजीनियरिंग एंड टेक्नोलॉजी (आईईटी) में चल रहे टेक्नो फेस्ट 'अंकुरण' के दूसरे दिन शनिवार को सर्वाधिक आकर्षण का केंद्र रोबो सूमो प्रतियोगिता रही। इसमें 16 टीमों के रोबोट के बीच फाइट ने सबको रोमांचित किया। प्रतियोगिता का फाइनल रविवार को होगा। कार्यक्रम की शुरुआत मेज रनर प्रतियोगिता से हुई। इसमें विभिन्न टीम के रोबोट ने भूल-भुलैया से निकलने की कड़ी कवायद की। वहीं, वाइल्ड शॉकर में रोबोट ने जमकर फुटबॉल खेला। पहले वर्ष के विद्यार्थियों के बीच टेक टॉक का

आयोजन किया गया ताकि वे तकनीकी की नई भाषाओं से अवगत हो सकें। लैन गेमिंग में काउंटर स्ट्राइक और फीफा को लेकर भी छात्रों में काफी उत्साह रहा। पेन फाइट, हाऊ टू डू इन वन मिनट, पोकर और डेविलिश डार्ट में भी विद्यार्थियों ने बढ़-चढ़कर भाग लिया। विभागाध्यक्ष प्रो. सुबोध वैरिया, विद्युत विभागाध्यक्ष प्रो. कुलदीप सहाय, डॉ. अनुराग त्रिपाठी ने भी फेस्ट में शिरकत की और एक प्रतिभागी के रूप में खूब एंजॉय भी किया। तीन दिवसीय फेस्ट का समापन रविवार को होगा।

अंकुरण में दिखा छात्रों का टैलेंट

फेस्ट में गेम खेलते प्रतिभागी

जासं, लखनऊ : शुक्रवार को इंस्टीट्यूट ऑफ इंजीनियरिंग (आईईटी) के इलेक्ट्रॉनिक्स विभाग द्वारा तकनीकि फेस्ट 'अंकुरण' का शुभारंभ हुआ। तीन दिवसीय कार्यक्रम का आयोजन संस्थान के तृतीय वर्ष के छात्र-छात्राओं द्वारा किया गया।

रोबोटिक्स थीम पर आधारित अंकुरण में रोबो सूमो, रोबो सेविवर, मेज रनर, वाइल्ड सॉकर समेत तमाम वैज्ञानिकता परक प्रतियोगिताएं हुईं। इस दौरान छात्रों की ओर से कोडर्स, डिकोड द कोड, फोटोग्राफी, इलेक्ट्रॉनिक सर्किट डिजाइन पर भी प्रतियोगिताएं भी आयोजित की गईं। इसके

साथ अनौपचारिक प्रसंगों में लैन गेमिंग, पेन फाइट, डेविलिश डार्ट, पोकर, हाऊ टू डू इन वन मिनट, रोबो मैसेंजर सहित तमाम मनोरंजक खेलों का भी आयोजन किया गया।

संस्थान के छात्रों द्वारा तैयार किए गए रोबोट्स व उनके इलेक्ट्रिक सर्किट की जानकारी भी अन्य छात्रों को मुहैया कराई गई। कार्यक्रम में ललित कला के छात्रों द्वारा की गई सुंदर सजावट आकर्षण का केंद्र रही। अंकुरण में छात्र प्रबल सिंह, अंकिता आनंद, शिवम कपूर की भूमिका भी सराहनीय रही।

E-YANTRA PARTICIPATION REPORT

Team Members

Shruti Joshi ECE 2nd Year , Jyotsna Sharma ECE 2nd Year , Ram Mahesh ECE 2nd Year , Shivangi Mishra ECE 2nd Year

In year 2017-18 these students participated in the e-Yantra robotics competition which was organized by the IIT Bombay and MHRD under National Mission on education through Information Communication and Technology (NMEICT). This program is being run by Prof Kavi Arya under ERTS Lab IIT-Bombay.

In year 2017-18 theme was Transporter Bot in Track 1. This track was designed for those participants who participate for first time.

There were 19 teams from our college out of which two teams made their place in second stage of competition. One team reached at the finals of the competition which was organized Victor Menezes Convention Centre (VMCC) IIT Bombay.

Below is the arena which consists of the task which had to be performed.

AIM :- The aim was to design a robotic system through which the students can pick the crates of fruits (blocks of different color) and place then at the Truck (rotating disc) in below image mean while to animate all this in Blender Game Engine an animation tool.

COMPONENT USED :-

Hardware:- Zigbee Communication in Mesh Topology, Firebird V Robotics research platform, Servo Motors, Stepper Motor, Arduino etc.
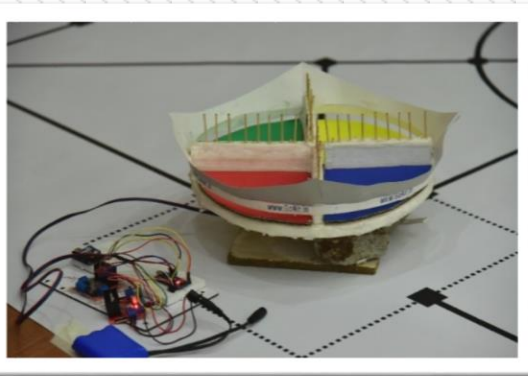
Softwares :- Blender Game Engine (an animation Tool), Python , X-CTU (to configure zigbee devices).
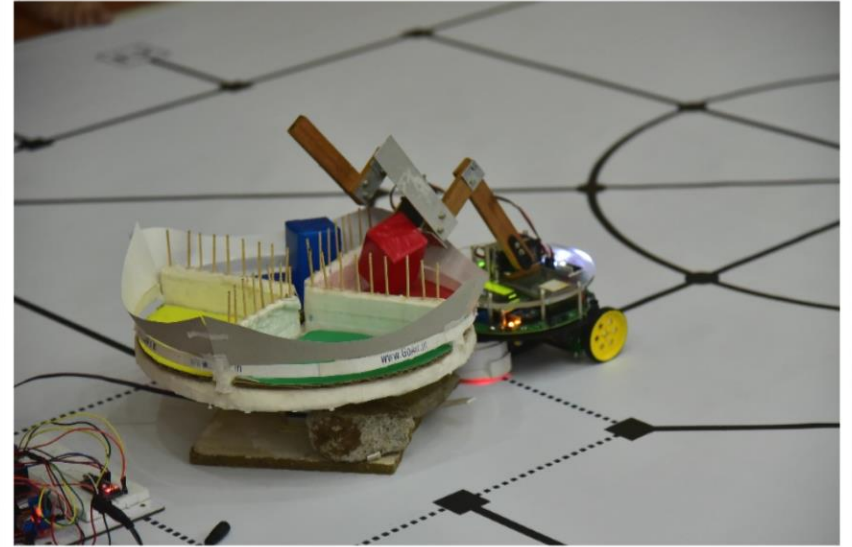
LEARNT IMPLEMENTATION OF :-

- Animation using Blender game engine, Python
- UART Communication, PWM, Robotics Arm Design, Networking Topologies, Zigbee Communication, Path Planning and Motion Control of Robot.
- Stepper motor control using Arduino Microcontroller

AVR Microcontroller and Working with embedded C.

FINAL ROBOT AND ROTATING DISC

DEMONSTRATION OF THE TASK IN FINALS

ANSWERING TO QUESTIONS OF JUDGES FROM IITB

SECOND RANK IN NATIONAL FINALS IN TRANSPORTER BOT.

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