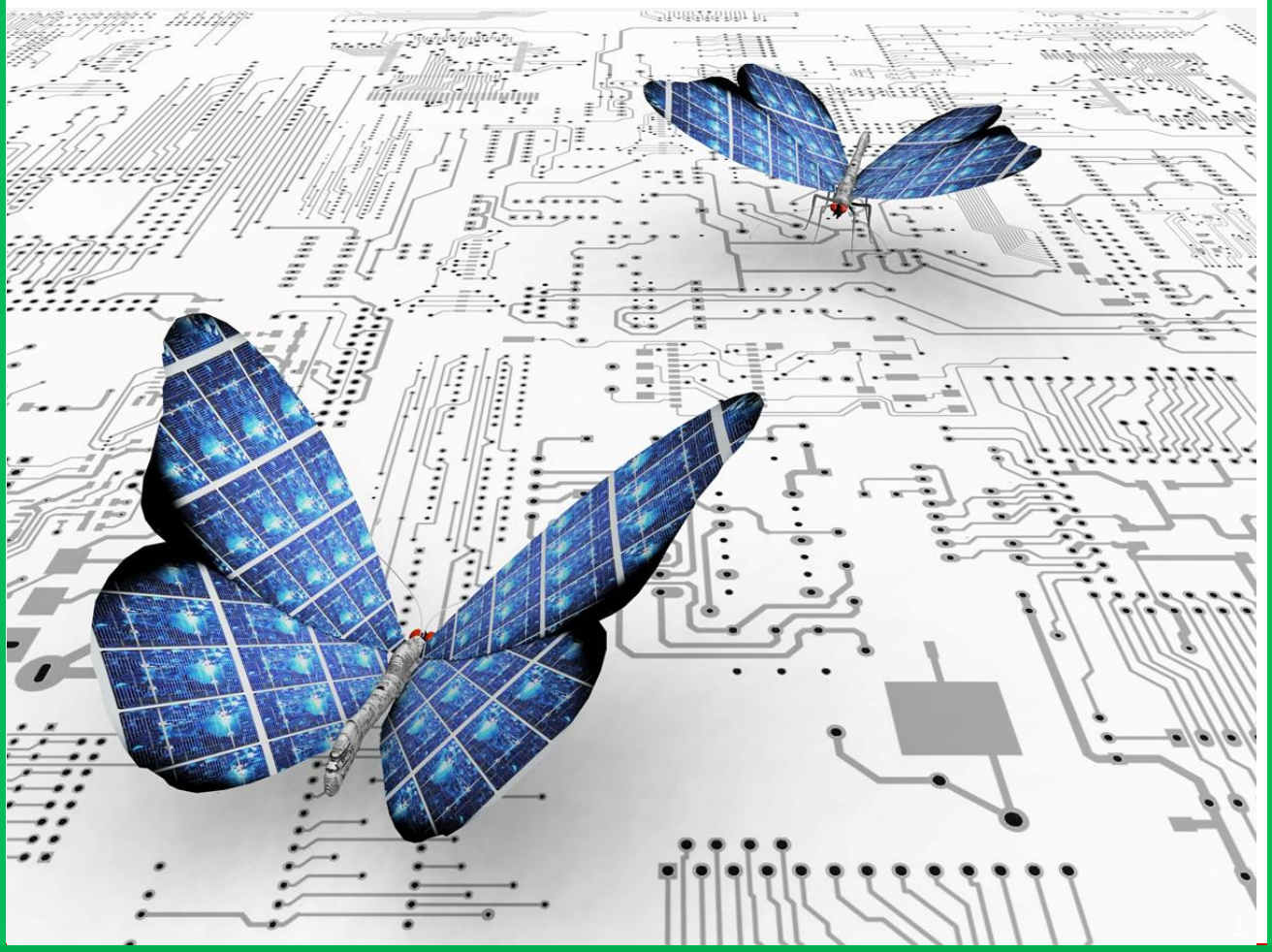
Jaipur Engineering College And Research Centre

Ujjwalam

Department of Electronics and Communication Engineering

July 2023



Director's Message

We are currently in the era of engineering revolution, spearheaded by recent developments in engineering sciences providing sustainable solutions to various issues in different areas. The Indian engineering programs have a promising future particularly the **Electronics and Communication** sectors are on the threshold of becoming global players by 2020. Fragments of this newsletter will tracks different event and activities that are taking place in the department. I extend my best wishes to all those who contributed to **Ujjwalam** and I am confident that the interaction will be a source of inspiration to the young talent budding in the college, who would be the educationists, technocrats and researchers of tomorrow. They would shoulder the responsibility of bringing in the desired innovations in their fields, leading to the advancement of the country.

Mr. Arpit Agarwal
Director, JECRC

Principal's Message

Jaipur Engineering College and Research Centre (JECRC), Jaipur is recognised as one of the best technical institutes in Rajasthan and is adopting the process of change that demands quality outcome based education. The vision of the institute is to become an institute of excellence in imparting outcome based education, providing platform to students for overall self development that includes ethics, moral values, etc. and develop research aptitude through project base learning. In the process of implementing outcome based education (OBE) the faculty members are measuring the progress and competency of the student as they go through a course in each semester and are being accessed against pre defined package.
The campus will soon have a video server where video lectures of all under graduate and post graduate programs delivered from the professors of IIT and IISc would be made available to the students 24x7 through a high speed Wi-Fi networking. This will create ample opportunities to learn the subject at there own base on there laptops and smart phones.
All the credit goes to outstanding reputation and dedication of the institute for all these years, under the able guidance of visionary Shree Arpit Agarwal Ji, Director of JECRC. Here at JECRC ,Jaipur, we are committed to impart necessary skills and knowledge to our students in best possible manner, in good spirit and in good environment by allowing them to dream big and help them to achieve the same.

Dr. V.K. Chandna,
Principal, JECRC

Mission and Vision of the College

VISION

To become a renowned centre of outcome based learning, and work towards academic, professional, cultural and social enrichment of the lives of individuals and communities.

MISSION

- Focus on evaluation of learning outcomes and motivate students to inculcate research aptitude by project based learning.
- Identify, based on informed perception of Indian, regional and global needs, areas of focus and provide platform to gain knowledge and solutions.
- Offer opportunities for interaction between academia and industry.
- Develop human potential to its fullest extent so that intellectually capable and imaginatively gifted leaders can emerge in a range of professions

VISION

To contribute through excellence in scientific and technical education, teaching and research in Electronics and Communication Engineering & to meet the needs of global industry.

MISSION

•To equip the students with a strong foundation of basic sciences and domain knowledge of ECE, so that they are able to creatively apply their knowledge to the solution arising in their career path.

•To induce the habit of life-long learning to enhance overall performance.

•Students are able to communicate their ideas clearly and concisely so that they can work in a team as well as an individual.

•To make students responsive towards the ethical, social, environmental and economic context for the society.

Newsletter ECE, JECRC Foundation, July Issue 2023

HOD'S Message

The Department of Electronics and Communication Engineering came into existence at the Jaipur Engineering College & Research Center in 2000, by the approval of All India Council for Technical Education (AICTE), to meet the growing requirement of practical design engineers in the country and abroad. The greatest asset of the department is its highly motivated and learned faculty. The available diversity of expertise of the faculty with the support of the other technical staff prepares the students to work in the global multicultural environment. The department not only aims to make our students technically sound and knowledgeable but also to nurture their wisdom and make them a better and responsible human being. The graduates of the Electronics & Communication Stream have been selected by some of the world's leading corporations & as well as by most of the leading Indian counterparts. We hope that we will continue to deliver our best to serve the society and mankind. It is also expected that our students will continue to pass on the skills which they have developed during their stay at this department to the whole of the world for a better society.

- Dr. Sandeep Vyas

Editor's Desk

It is with great pleasure that we bring to you the July issue of **Ujjwalam,** the newsletter of ECE Department JECRC Jaipur. The name of our newsletter- **Ujjwalam-** signifies **brightness,** With faculty members that consist of bright minds and students who are keen to leave a mark, our future is in safe hands indeed.

The goal of this newsletter is to update you all with the developments at ECE department (JECRC) Jaipur. The current issue will provide the information about the various initiatives of department which are related to academics, research and innovation, student affairs, alumni and departmental laboratory / workshop. This newsletter besides reporting on the major events will also report on laurels earned by our faculty members, staff and students.

While acknowledging valuable inputs received from the faculty members, staff and students, we also welcome suggestions from them to help us develop the newsletter further.

The July issue is in your hands.

Happy reading!!

Dr. Parul Tyagi

Program Outcomes

PROGRAM OUTCOMES are Graduate Attributes

- **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and electronics & communication engineering specialization to the solution of complex electronics and communication engineering problems.
- **Problem analysis:** Identify, formulate, research literature, and analyze complex electronics and communication engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. .
- **Design/development of solutions:** Design solutions for complex electronics and communication engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of electronics and communication engineering experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Program Outcomes

- **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern electronic engineering and IT tools including prediction and modeling to complex electronics and communication engineering activities with an understanding of the limitations.
- **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- **Environment and sustainability**: Understand the impact of the professional electronics and communication engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the electronics and communication engineering practice.
- **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Program Outcomes

- **Communication**: Communicate effectively on complex electronics and communication engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

- **Project management and finance**: Demonstrate knowledge and understanding of the electronics and communication engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

- **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of electronics and communication engineering changes.

Program Specific Outcomes

PSO1 Ability to develop knowledge for robotics and its applications

PSO2 Ability to apply the concept of IoT for challenges of real-world.

Program Educational Outcomes

PEO 1

•To provide students with the fundamentals of engineering sciences with more emphasis in electronics & communication engineering by way of analyzing and exploiting electronics engineering challenges.

PEO 2

•To train students with good scientific and electronics & communication engineering knowledge so as to comprehend, analyze, design, and create electronic based novel products and solutions for the real life problems.

PEO 3

•To inculcate professional and ethical attitude, effective communication skills, teamwork skills, multidisciplinary approach, entrepreneurial thinking and an ability to relate electronics & communication engineering with social issues.

PEO 4

•To provide students with an academic environment aware of excellence, leadership, written ethical codes and guidelines, and the self-motivated life-long learning needed for a successful electronics & communication engineering professional career.

Inside This Issue!!

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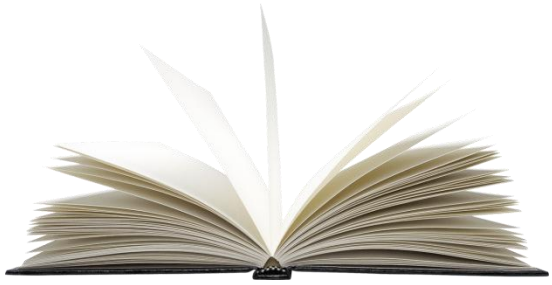

❑ Introduction to Newsletter

The aim of the newsletter is to keep each member of ECE family of JECRC connected and updated. Notable achievements of our students, alumni and faculty members will be highlighted along with some articles on latest technologies, and campus life. We wish that all who contribute to the growth and achievements of the department get acknowledged. We welcome your inputs for future newsletters and urge you to stay connected with us.

TWO DAYS WORKSHOP IN DATA SCIENCE USING PYTHON

A two-day workshop on data science using Python was co-hosted by Upflairs Pt. Ltd. with limited accountability through the Department of Electronics and Communications. This course presents data processing and cleaning procedures utilising the popular Python pandas data Science Library, as well as Series and Data Frame as the fundamental data structure abstraction for data analysis, including examples on how to use features such as group by, merge, and pivot tables. Effectively. Following the session, refreshments were offered to all participants. Event specialists and coordinators discussed their thoughts on the topic's future and scope. At the workshop, a post-event quiz was arranged, and the top three winners received awards. The event was originally scheduled for August 30-31, 2022, from 10 a.m. to 16 a.m.

POSTER OF THE EVENT

GLIMPSE OF THE EVENT

CERTIFICATES

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IEEE RAJASTHAN SUBSECTION

STUDENT CHAPTER OPTICA JECRC FOUNDATION JAIPUR

Scheme for Promoting Interests, Creativity & Ethics among Students (OPICES) Scheme

CERTIFICATE

This is to certify that Mr./Ms .AAYU From Jaipur Engineering College and Research Centre has participated in Two Days Workshop in *"DATA SCIENCE USING PYTHON"* on 30 Aug 2022 and 31 Aug 2022

in association with

IEEE Rajasthan Subsection

&

OPTICA Student Chapter, JECRC

&

AICTE-Scheme for promoting Interests, Creativity and Ethics among Students

Prof. V.K Chandna	Prof. Sandeep Vyas	Mr. Ashish Sharma	Mr. Vikas Sharma
PRINCIPAL	HOD, ECE	TPO, ECE	COORDINATOR

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IEEE RAJASTHAN SUBSECTION

STUDENT CHAPTER OPTICA JECRC FOUNDATION JAIPUR

Scheme for Promoting Interests, Creativity & Ethics among Students (OPICES) Scheme

CERTIFICATE

This is to certify that Mr./Ms. MUSKAN MATHUREFrom Jaipur Engineering College and Research Centre has participated in Two Days Workshop in *"DATA SCIENCE USING PYTHON"* on 30 Aug 2022 and 31 Aug 2022

in association with

IEEE Rajasthan Subsection

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OPTICA Student Chapter, JECRC

&

AICTE-Scheme for promoting Interests, Creativity and Ethics among Students

Prof. V.K Chandna	Prof. Sandeep Vyas	Mr. Ashish Sharma	Mr. Vikas Sharma
PRINCIPAL	HOD, ECE	TPO, ECE	COORDINATOR

CERTIFICATES

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IEEE RAJASTHAN SUBSECTION

STUDENT CHAPTER OPTICA JECRC FOUNDATION JAIPUR

CERTIFICATE

This is to certify that Mr./Ms. RAVI SINGHAL From Jaipur Engineering College and Research Centre has participated in Two Days Workshop in *"DATA SCIENCE USING PYTHON"* on 30 Aug 2022 and 31 Aug 2022

in association with

IEEE Rajasthan Subsection

&

OPTICA Student Chapter, JECRC

&

AICTE-Scheme for promoting Interests, Creativity and Ethics among Students

Prof. V.K Chandna	Prof. Sandeep Vyas	Mr. Ashish Sharma	Mr. Vikas Sharma
PRINCIPAL	HOD, ECE	TPO, ECE	COORDINATOR

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IEEE RAJASTHAN SUBSECTION

STUDENT CHAPTER OPTICA JECRC FOUNDATION JAIPUR

CERTIFICATE

This is to certify that Mr./Ms. PRATEEK AGRAWAL From Jaipur Engineering College and Research Centre has participated in Two Days Workshop in *"DATA SCIENCE USING PYTHON"* on 30 Aug 2022 and 31 Aug 2022

in association with

IEEE Rajasthan Subsection

&

OPTICA Student Chapter, JECRC

&

AICTE-Scheme for promoting Interests, Creativity and Ethics among Students

Prof. V.K Chandna	Prof. Sandeep Vyas	Mr. Ashish Sharma	Mr. Vikas Sharma
PRINCIPAL	HOD, ECE	TPO, ECE	COORDINATOR

Workshop on 5G Technology & Its Challenges (Engineers Day)

A workshop was held on September 15th, 2022, to help address myths and concerns around 5G technology. The event was organized by the Department of Telecommunication, Government of India and the Department of Electronics & Communications Engineering JECRC. The workshop aimed to educate people about the latest advancements in communication technology, particularly the high frequency bands and high data rate capabilities of 5G technology.

Several expert speakers, including Mr. Fateh Singh, Mr. Rakesh Kumar Meena, and Mr. Arpit Shukla, shared their insights on the challenges surrounding the installation of telecom towers and other related topics. Attendees, including students, had the opportunity to ask questions and share their doubts about the height and radiation levels of the towers. The event lasted from 10:00 am to 4:00 pm and was part of a new initiative by the Indian government to raise public awareness about telecom tower installations.

Poster of the Event

GLIMPSE OF AN EVENT

Project Exhibition

On December 15th, 2022, a project development event was held, which showcased the impressive talents of over 105 participating students. The event took place after an add-on course in the department and other departments, highlighting hardware embedded systems and machine learning software projects.

Expert speakers, Ms. Sweta Sharda and Mr. Sudarshan Kumar Jain, provided valuable guidance to the students during the event. The projects were thoroughly evaluated, and three groups were awarded prizes for their exceptional work.

The event was a great opportunity for students to display their technical expertise, creativity, and problem-solving skills. The projects presented were of exceptional quality, and attendees praised the students' innovative ideas.

The event was well received by attendees and organizers alike and helped reinforce a culture of innovation and collaboration among the participating students.

Poster of the Event

GLIMPSE OF AN EVENT

Certificate

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IEEE RAJASTHAN SUBSECTION

STUDENT CHAPTER OPTICA JECRC FOUNDATION JAIPUR

Scheme for Promoting Interests, Creativity & Ethics among Students (SPICES) Team

CERTIFICATE

This is to certify that Aman Somvanshi From Jaipur Engineering College and Research Centre has participated in "One Day inter department Project Exhibition" based on add on courses on 15 Dec 2022.

in association with

IEEE Rajasthan Subsection

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OPTICA Student Chapter, JECRC

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AICTE-Scheme for promoting Interests, Creativity and Ethics among Students

Prof. V.K Chandna	Prof. Sandeep Vyas	Mr. Ashish Sharma	Mr. Vikas Sharma
PRINCIPAL	HOD, ECE	TPO, ECE	COORDINATOR

TCS Training Program

JECRC's T&P Cell recently conducted a two-day TCS Training Program for final year students to enhance their problem-solving and communication skills for TCS placement drive. Trainers from FACE, Ms. Sushma Sanjay Panwar and Mr. Surender Praveen, conducted the program covering aptitude and logical reasoning topics and technologies. The students were taught various tricks and tips for solving problems related to topics such as Simple equation, Ratio and proportion, Variation, Percentages, Profit and loss, Partnership, and Quadratic equation. The training sessions equip students with the necessary skills to excel in their fields during the recruitment season, giving them an edge over peers. This initiative by the institute received positive feedback and will help secure students' future careers.

Poster of the Event

JECRC
JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

Student Chapter
OSA
JECRC Foundation Jaipur

Aug 12-13, 2022

Department of Electronics & Communication Engineering

Jaipur Engineering College and Research Centre, Jaipur

Presents

"TCS NQT TRAINING PROGRAM"

August 12-13, 2022

Timing 6 PM

RESOURCE PERSONS

DAY 1

SURENDER PRAVEEN

Technology Specialist

DAY 2

SUSHMA SANJAY PANWAR

Aptitude Specialist

Convener

Prof. V. K. Chandna
Prof. Sandeep Vyas

Coordinators

Mr. Ashish Kulshrestha
Mr. Ashish Sharma

Accenture Training Program

JECRC's Training & Placement (T&P) Cell conducted a 3-day Accenture Training Program in association with FACE for final year students on Aug 18-20, 2022. The program aimed to enhance problem-solving and communication skills for Accenture's placement drive.

The trainers, Abishek B and Sivaraman Gananathan from FACE, covered various aptitude and logical reasoning topics and technologies beneficial for placements. Simple tricks and tips were taught to solve problems related to topics like equations, ratios, percentages, and more.

The T&P Cell prepares students with necessary skills to excel in their fields by conducting pre-placement training sessions. The Accenture Training Program was a success and received positive feedback from participating students, who enjoyed and learned from the program.

Poster of the Event

JECRC
JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

IETE

Student Chapter
OSA
JECRC Foundation Jaipur

Aug 18-20, 2022

Department of Electronics & Communication Engineering

Jaipur Engineering College and Research Centre, Jaipur

Presents

"ACCENTURE TRAINING PROGRAM"

August 18-20, 2022

Timing
9 AM - 12 PM
1 PM – 4 PM

RESOURCE PERSONS

DAY 1

ABHISHEK B

Aptitude Specialist

DAY 2

SIVARAMAN GANANATHAN

Technology Specialist

Convener

Prof. V. K. Chandna
Prof. Sandeep Vyas

Coordinators

Mr. Ashish Kulshrestha
Mr. Ashish Sharma

GLIMPSE OF AN EVENT

NITTTR- FDP

In September 2022, fifth-semester ECE students visited the SSTPL Technologies Pt. Ltd. campus with faculty coordinator Mr. Naresh Kumar and HR representative Mr. Ajay Sharma. The visit aimed to give students hands-on experience and insight into the latest technological advancements and industrial processes. The Sales Head gave a brief presentation on the company's history, partners, and international work. The students then interacted with the engineers, who provided an overview of the manufacturing process and showed the students the equipment used in fabrication and assembly. The Chief Engineer explained the workings and fabrication of the equipment in detail. The visit proceeded to the ultra-precision machining facility, where students viewed the working of training kits for various communication applications, hard-turning machines, mechanical tools, drilling machines, punch machines, lathes, and soldering. In the Vision Laboratory and Prototyping centre, students gained insight into the latest developments in the manufacturing industries. The students also visited the machine shop, where they interacted with research scholars and learned about the concepts of electronic and communication equipment. Overall, the visit was impactful and gave students a perspective on the gap between industry and academia, which they could work towards bridging to enhance their learning and knowledge.

GLIMPSE OF AN EVENT

Hindi Diwas

Computer Science & Engineering and Electronics and Communication Departments of JECRC University celebrated Hindi Diwas on September 14, 2022. The event aimed to promote Hindi language globally and educate the new generation about adopting Hindi in the devanagri script as one of the official languages of the nation. Kishore Pareek, Librarian at HcM RipA, Jaipur and president of Rashtriya Mahakavi Sangh, graced the event as the chief guest. The event included various competitions such as Retro Singing and Poetry, Bharat Hindi Vartalap and Ahankar Ravaan Ka. The winners of these competitions were awarded prizes, and the event concluded with the singing of the National Anthem. The event was a grand success, with a large number of students participating, and it provided an opportunity to learn about Hindi language and culture.

Poster of the Event

GLIMPSE OF AN EVENT

Teacher's Day

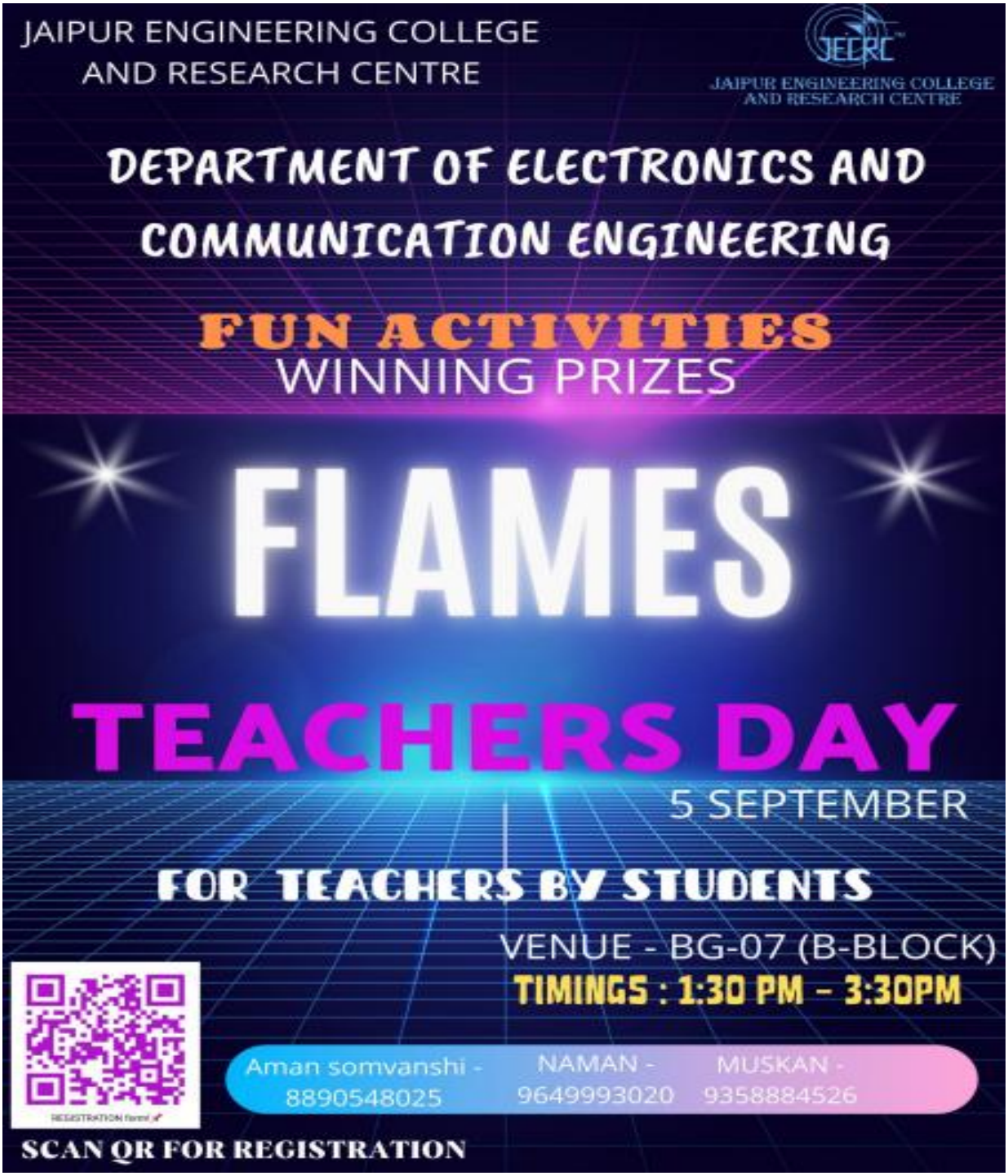
On September 5th, 2022, the JECRC Foundation celebrated Teacher's Day from 1:30 pm to 3:30 pm. The event was coordinated by Ms. Tripti Dua, an assistant professor in the ECE Department, and led by Aditya Bhardwaj, Aman Somvanshi, Naman Grover, and Daksh Jain. The HOD of the ECE department, Dr. Sandeep Vyas, and all the faculty members were welcomed to the event with a tilak ceremony.

Aditya Bhardwaj hosted the event and welcomed Dr. Sandeep Vyas and all the faculty members to the stage for the lamp lighting and Saraswati Vandana. Muskan Garg, a second-year student, gave a speech on Teacher's Day in Sanskrit. The students performed various activities like dancing, singing, and poetry, and also made the faculty members participate in some fun games.

Dr. Sandeep Vyas spoke about Teacher's Day and shared some inspiring stories. He encouraged the students to trust and believe in their teachers' guidance. The faculty members also sang songs and reminisced about their fun experiences during their student life. The event ended with the cake-cutting ceremony by the faculty members, followed by students presenting gifts to the HOD and all the faculty members as a token of their love and respect.

The audience of the event comprised students and faculty members of the ECE Department. Anish Jain, a second-year student, delivered the vote of thanks, and the event was concluded at 3:30 pm.

Poster of the Event



GLIMPSE OF AN EVENT

Industry Visit

On September 30th, 2022, the V semester students of JECRC Foundation were treated to an industrial visit to TESCA Technologies. The visit, which was scheduled at 10:30 AM, included a bus ride to the TESCA campus. Upon arrival at 10:55 AM, the students were taken to the Board Room, where they were given an introduction to TESCA Technologies, the company's partners, and the countries where the company operates.

The visit then moved to the fabrication and assembly floor, where the students were given a first-hand look at the process of manufacturing equipment. Each table on the floor carried out specific tasks, such as initial paper-based processes and later fabricating the equipment.

The students were then taken to the Ultra-Precision Machining facility, where they observed the working of various equipment, including training kits for communication applications, hard-turning machines, intelligent ultra-precision turning machines, mechanical tools, drilling machines, punch machines, lathes, and soldering machines.

The visit concluded with the students exploring the Vision Laboratory and the Prototyping Centre, where they learned about the latest developments in the manufacturing industry. The students thoroughly enjoyed interacting with engineers and research scholars at the rapid prototyping centre, where they gained insights into electronic and communication equipment concepts.

Overall, the visit was a great success, as it helped bridge the gap between industry and academia. The students gained valuable knowledge and insight into the workings of a real-world manufacturing facility, which will undoubtedly aid them in their future endeavours.

GLIMPSE OF AN EVENT

EDITOR'S DESK

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Aryan Sharma
ECE 3th YEAR

Divya Saxena
ECE 3th YEAR

Ayush Sharma
ECE 3th YEAR

Abhijeet Dadheech
ECE 3th YEAR

Aircraft and automobile sector

Core electronics job

CAT

GRE

ROBOTICS

Private Non Core Sector

Government and bank jobs

Research

Designing

Teaching

PSU Jobs

UPSC

Electronics

GATE

IES

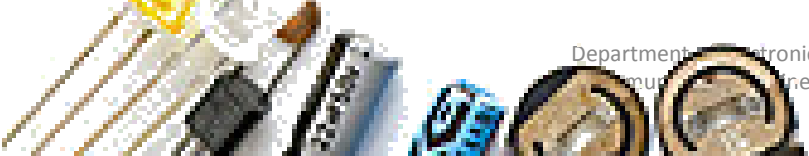
Tele communication Industry

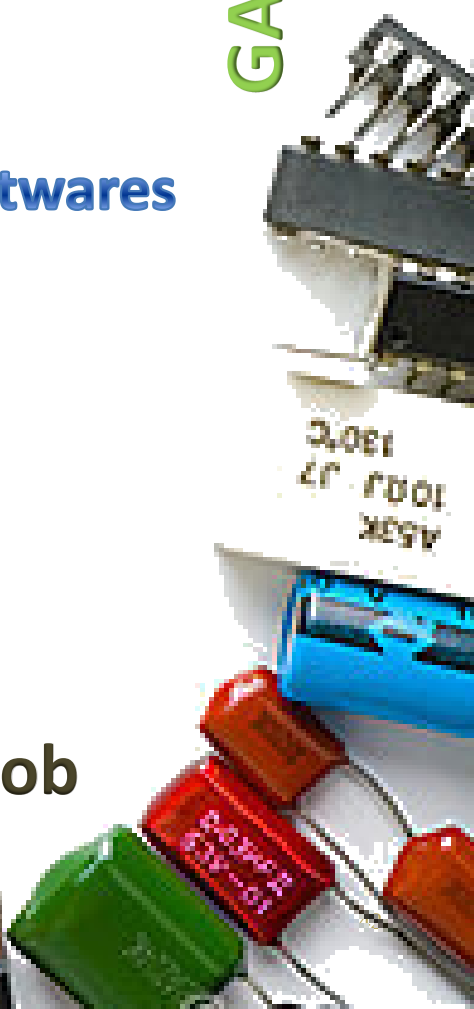
GMAT

Softwares

Signal And Processing firm

Core electronics job





Department of Electronic
Mumbai University

To be continued….