

# TECH ANANTH

... infinite technology

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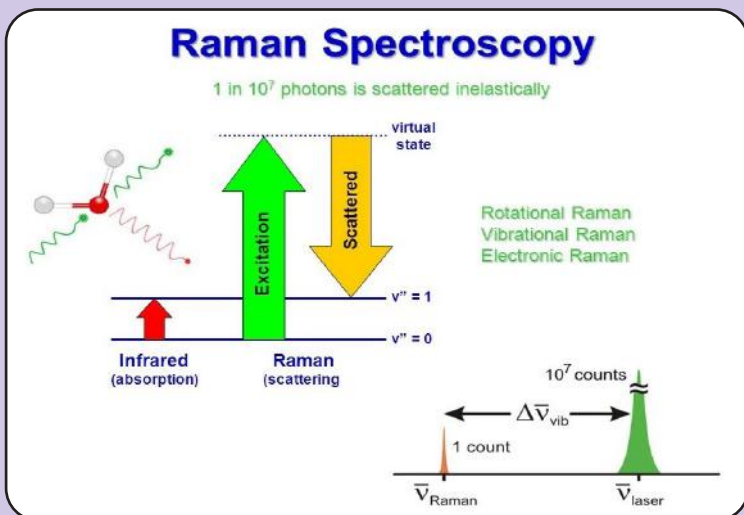
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## JNTUA COMMEMORATES NATIONAL SCIENCE DAY

**Theme of 2023 National Science Day “Global Science for Global Wellbeing”**



**Sir C.V Raman, Physics Nobel Laureate 1930.**



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# Minors and Honors in Engineering

*Multi disciplinary approach to study*

- Dr.E Keshava Reddy

## Minor degree in Engineering

Among all other academic reforms introduced in the session 2018-19, one of the most profound adaptations was the introduction of the minor degree program for UG students. Since its inception, there has been a lot of speculations and criticism pertaining to the new system. Initially commenced to enhance the knowledge set of UG students beyond their branch domain and encourage multi-disciplinary expertise, the program primarily aims at amplifying the employment scope of student.



The minor has to be a subject offered by a department other than the department that offers the major of the student or it can be a different major offered by the same department. For example, a student with the declared major in Computer Science and Engineering (CSE) may opt to do a minor in Mathematics; in which case, the student shall receive the degree B.Tech, Computer Science and Engineering with a minor in Mathematics. A student can do Majors in chosen field as per the career goal, and a minor may be chosen to enhance the major thus adding the diversity, breadth and enhanced skills in the field.

Only students having no credit arrears and a 60% or above at the end of the third semester (for lateral entry students only third semester) are eligible to register for B.Tech with minor degree. After registering for the B.Tech with minor degree program, if a student fails in any course, s/he will not be eligible for B.Tech with minor degree.

From this year, all engineering branches can offer courses in emerging technologies either as minor degrees or electives. The approved electives/minor degrees include artificial intelligence; Internet of Things; blockchain; robotics; quantum computing and augmented reality/virtual reality.

Institutions however, cannot increase their intake for regular courses. The specialisation in emerging areas is “permitted within the approved intake without hampering the generic course” according to the approval process handbook released by the All India Council for Technical Education.

The Council has permitted Universities to evolve syllabi for any minor degree/honours for which model syllabi are not available on its website. Undergraduate degree courses in the emerging areas shall be allowed as specialisations from the same department, however. Candidates who take the courses must do a minimum of 18-20 credits in addition to the 160 for major degree and it will be mentioned in the degree as a specialisation in that particular area. A candidate from another department who takes courses in the emerging areas for the additional credits will receive “a degree with minor from another department”.

## Objectives of Minor Degree



## Advantages of Minor in Engineering

- ▶ The minors mentioned above are having lots of advantages and a few are listed below: To apply the inter-disciplinary knowledge gained through a Major (Stream) + Minor.
- ▶ To enable students to pursue allied academic interest in contemporary areas.
- ▶ To provide an academic mechanism for fulfilling multidisciplinary demands of industries.
- ▶ To provide effective yet flexible options for students to achieve basic to intermediate level competence in the Minor area.
- ▶ Provides an opportunity to students to become entrepreneurs and leaders by taking business/management minor.
- ▶ Combination in the diverse fields of engineering e.g., CSE (Major) + Electronics (Minor) combination increases placement prospects in chip designing companies.
- ▶ Provides an opportunity to Applicants to pursue higher studies in an inter-disciplinary field of study.
- ▶ Provides opportunity to the Applicants to pursue interdisciplinary research.
- ▶ To increase the overall scope of the undergraduate degrees.

## Honour's in Engineering

An honour is the field in which a student focuses during the course of his/her degree. An Honours degree typically refers to a higher level of academic achievement in the major area. Minor is a secondary concentration of courses that often complements the honours. Minor are coherent sequences of courses which may be taken in addition to the courses required for the B.Tech degree.



Honours Certificate for Vertical in his/her OWN major for Research orientation; Minor in any OTHER branch for Improving Employability.



Only students having no credit arrears and a 70% or above at the end of the third semester (for lateral entry students only third semester) are eligible to register for B.Tech (Honours). After registering for the B.Tech (Honours) program, if a student fails in any course, s/he will not be eligible for B.Tech (Honours).

The Honours Degree was first introduced to the world by the United Kingdom. It became a popular course which was preferred by those who pursued to establish a deeper understanding and learning of a subject of their interest. The honours degree was made to differentiate from the bachelor's on the criteria of deep learning and specialization over specific subjects. Soon the Honours degree made itself home across various nations including India. Many prestigious universities and colleges became the first to adopt it and started offering their courses to their students. Central Universities, being one of them, continue to offer many popular Honours courses to their students till today.

The curriculum of an Honours degree is designed specifically for a higher standard of learning. They are prepared to keep in mind the requirement of a deeper understanding of the given subject. Despite being at the undergraduate level, an Honours degree curriculum may contain a diverse range of topics and lengthy coverage of each of them to inculcate a specialized form of understanding of the subject topics in the students.

A non-honors degree is a standard undergraduate degree that is earned through completing the required coursework for a particular field of study. This type of degree does not typically come with any special honors or distinctions. Non-honors

degrees can be earned in a wide variety of subjects, including arts and sciences, business, education, engineering, and many others. These degrees typically include general education requirements and specific coursework within the student's chosen major.

When students are interested in studying several diverse subjects at an undergraduate level, they can choose a joint or combined Honours degree. This is the toughest of all since it would require one to put in extra effort to complete all the learning and studying. This is for all the high-achievers who can't be satisfied with just one subject to specialize in and want the opportunity to have two or even three subjects' specializations as part of their standard undergraduate degree.

### Key Differences between the both

The main difference between an honors degree and a non-honors degree is the level of difficulty and depth of the coursework required to complete the program. An honors degree typically requires more advanced coursework, independent research, and a higher level of academic achievement than a non-honors degree. In addition, honors students are usually expected to maintain a higher grade point average and may be eligible for special academic honors or recognition upon graduation. Honors de-

grees may also include additional requirements such as a thesis or a capstone project. In some universities, Honors programs may also include specialized seminars, small class sizes, and opportunities for research and independent study with professors. Additionally, an honors program may come with a lot of academic support, and the credits earned may be transferable to graduate school or professional degree programs.

### Conclusion

There is no doubt that a Bachelor's degree is easier to pursue and complete when compared to an Honours Degree. However, if you want the best of both worlds, which means, a strong foundation plus a specialization in your favorite trending skill, then you must check out list of courses curated by experts. They offer specialization in most in-demand skills leading you to a secure and happy future straight after your graduation.

The value of an honors degree versus a non-Honors degree depends on the context and the specific program of study. In general, Honors degrees may indicate that a student has taken additional coursework, completed a thesis or other research project, or maintained a high GPA, and could be seen as more rigorous or challenging than a non-Honors degree. This could make them more desirable to certain employers or graduate programs. It may also open some career opportunities, or open more options to pursue higher education. However, it's also important to note that the value of an honors degree varies depending on the field of study and it's not always necessary to pursue an honors degree to achieve success in a particular career. It also depends on the educational institution, some universities have highly esteemed Honors programs, while others might not carry as much weight.



### About the Author



Prof. Keshava Reddy is a professor of Mathematics at JNTUA College of Engineering Anantapur and presently serving as the Director of Evaluation at JNT University Anantapur. He has written books on Mathematics which will not only improve the knowledge of engineering students and help students to improve their research capabilities in Mathematics. His Modular Object-Oriented Dynamic learning Environment (Moodle) site is <http://keshava.moodlecloud.com> or <https://keshava.moodle.school>, through which he teaches Mathematics to B.Tech. and M.Tech. students online. He is guiding young minds to achieve their research goals in the field of Mathematics.

# CREATIVITY IN DESIGN OF LOGOS: HIDDEN SYMBOLS

- Prof.P.R.Bhanu Murthy

**A** logo is a combination of text and visual imagery used by a company or an organization. The logo serves two purposes. It tells people the name of the company and it creates a visual symbol that represents the business. Some logos have powerful symbolic association connected to people's memory. There are many firms specialized in the design of Logos for companies because designing a logo is a creative job. It needs lot of understanding about the company's business or activities, perception of the people in general and conveying a powerful message through simple picture.

Actually the important things that make a logo effective are the colours used, shapes utilized and the text if any. Regarding the use of colours, a very big subject is there about the "The Psychology of colours". Different shapes like circles, arrows, squares, flowers, free flowing lines etc are used in many logos. For example, let us see the logo of famous sports shoe company Nike:



You may wonder what is the creativity involved here? It is only a simple tick mark with name of NIKE! The Nike Swoosh corporate trademark was created in 1971 by Carolyn Davidson while she was a graphic design student at Portland State University. In Greek mythology, Nike is the Winged Goddess of Victory. The tick mark in the logo symbolizes the

wing and sound swoosh, the sound of speed, movement, power and motivation.



McDonald's



Coca-Cola



KFC



pepsi

Pepsi

Ever wondered why many companies related to food industry have red as a prominent colour in their logos?

It is because, as per the Psychology of colours, red colour increases the appetite and hunger!

So the point is designing a logo needs lot of creativity. In this article I am going to introduce you some logos which have been so thoughtfully designed and so much creative thinking has gone into them because they have hidden images related to the specific company or Institution or the organization. These hidden images, though not recognized by the person who sees the logo, yet they get imprinted in the subconscious mind of the seer.

Logo of "The Hope for African Children Initiative" shows a child and a mother and the map of Africa between them.



**Hope for African  
Children Initiative**

## 1. LOGO OF TOUR DE FRANCE

The Tour de France is an annual men's multiple-stage bicycle race primarily held in France, while also occasionally passing through nearby countries. The Tour de France, a cycling event, is committed to **promoting mobility by bicycle**. It wishes to generate a positive impact by inspiring all those who can to make cycling a part of their life every day. Let us see its logo:



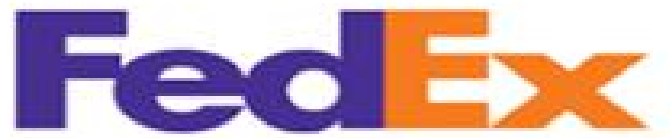
One can clearly see “Tour de France” in the logo. But many people fail to see the hidden image a bicyclist which symbolizes motive of this event. The picture of a cyclist is embedded in the logo as shown.



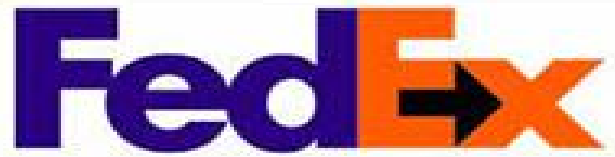
Image of a cyclist

## 2. LOGO OF FEDEX

FedEx Corporation, formerly Federal Express Corporation and later FDX Corporation, is an American multinational conglomerate holding company focused on transportation, e-commerce and business services based in Memphis, Tennessee. What makes FedEx unique? FedEx was not the first shipping company to be developed. However, with the time FedEx made its place on the market and created its own name for its timely and reliable services. The service given by FedEx is still up to the mark, and that is what made FedEx unique from others.



The speed with which the company delivers the consignments and the passion for the company for progress are represented by a hidden arrow in the logo, cleverly using the empty space between letters E and x.



Hidden Arrow

## 3. LOGO OF BASKIN ROBBINS

Baskin-Robbins is an American multinational chain of ice cream and cake speciality shops owned by Inspire Brands. Based in Canton, Massachusetts, Baskin-Robbins was founded in 1945 by Burt Baskin and Irv Robbins in Glendale, California. It is the world's largest chain of ice cream speciality stores, with more than 8,000 locations, including nearly 2,500 shops in the United States and over 5,000 in other countries. Baskin-Robbins has stores in nearly 50 countries.



In the logo, normally people see the letters B and R representing Baskin Robbins. But you can also see number 31 from the letters B and R. What is this 31? The company is known for its “31 flavours” slogan, with the idea that a customer could have a different flavour every day of any month. Is it not brilliant!.



#### 4. LOGO OF APPLE

Apple company needs no introduction, and it is one of the most prominent digital technology companies whose products have a wide variety. The present day logo of apple company was evolved over many years and several logos were used earlier by Apple. The present logo of the company is:



There are many fascinating interpretations of the Apple. Isaac Newton, who is considered to be the greatest scientist the world has seen, discovered the [gravitational force](#) when an apple fell on his head. The theory revolutionized the world of Physics. Similarly, as per Bible, when Eve ate the apple in the Garden of Eden, all the worldly knowledge of shyness and other human emotions became known to her. So apple symbolizes the origin of [Knowledge](#)! Or a source of knowledge! But why a bitten apple? How do you describe the image of apple above? Generally, we say [“Someone has taken a bite of the apple.”](#) Or [“Some body bit the apple”](#). What is ringing in our mind by hearing these words? Bits and Bytes are the building blocks of digital technology!

#### 5. LOGO OF CISCO



[Cisco Systems, Inc.](#), commonly known as [Cisco](#), is an American-based multinational digital communications technology conglomerate corporation headquartered in San Jose, California Cisco

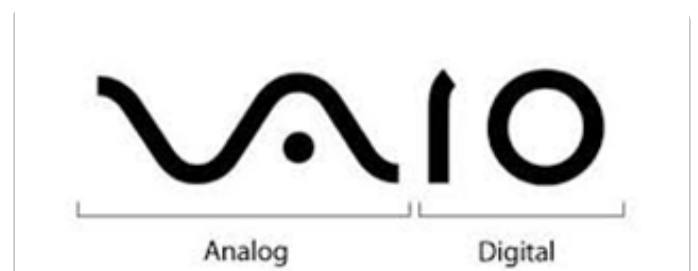
develops, manufactures, and sells networking hardware, software, telecommunications equipment and other high-technology services and products. What exactly the lines in the logo mean? Many people think they are signals. But there is an interesting story behind these lines. The founders of Cisco went over famous [Golden Gate Bridge](#) on their way to San Francisco city to register their company. “Cisco” was actually derived from the city name San Francisco and initially the company’s engineers insisted on using the lower case [“cisco”](#). [The initial logo depicts the shape of the Golden Gate Bridge, the famous landmark from San Francisco.](#)



Here’s a very clever logo from Sony Vaio, which stands for Visual Audio Intelligent Organiser. It is an abbreviation for Visual Audio Intelligent Organiser, but at the same time it tells something more.



It indicates that the communication technology of the company uses both analog and digital modes.



## 7. LOGO OF CIRCUS OF MAGAZINES

Circus of Magazines is an online marketplace for magazines. While designing the logo, the challenge consisted of avoiding any cliches while keeping in mind the client's desire to incorporate a classic circus feature in the mark. The final result is a simple and memorable logo and a mark that works well for stand-alone usage.



This figure reflects the wonderful creativity of the designer. One of the features of any circus is the Big Circus Tent. One can clearly see the circus tent in the picture. At the same time, the logo resembles an open book indicating the business of the online company.



## About the Author



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## 8. LOGO OF BEATS



The 'b' is enclosed in a circle followed by the brand name. The circle, though, isn't just a circle. It actually represents a human's head, and the 'b' letter-form represents the brand's headphones.

## CONCLUSION

These are only a few logos with hidden images and meanings. There are hundreds of such logos and interested people can get the information about them from the internet. This article is written to create awareness about the creativity involved in logo design and to incite the inquisitiveness to study the logos of different companies. Many logos like [Google's Picasa](#), American Food Marketing company [Wendy's](#) and famous Sports gear manufacturer [Adidas](#) have fascinating stories behind them. Hope you will enjoy and appreciate them.

# National Science Day (NSD) 2023

*“Global Science for Global Wellbeing”*

28<sup>th</sup> February is celebrated as National Science Day (NSD) in India. NSD is celebrated to commemorate discovery of the ‘Raman Effect’, which led to Sir C.V. Raman winning the Noble Prize.

**When was the day declared as National Science Day?**

In 1986, the National Council for Science and Technology Communication (NCSTC) asked the Government of India to designate 28 February as National Science Day which the then Govt. of India accepted and declared the day as National Science Day in 1986. The first National Science Day was celebrated on February 28, 1987.

**What is Raman Effect?**

Raman Effect is a phenomenon in spectroscopy discovered by the eminent physicist Sir Chandrasekhara Venkata Raman in 1928. After two years in 1930, he got Nobel Prize for this remarkable discovery and this was the first Nobel Prize for India in the field of Science. While working in the laboratory of the Indian Association for the Cultivation of Science, Kolkata.

Raman Effect is a change in the wavelength of light that occurs when a light beam is deflected by

molecules. When a beam of light traverses a dust-free, transparent sample of a chemical compound, a small fraction of the light emerges in directions other than that of the incident (incoming) beam. Most of this scattered light is of unchanged wavelength. A small part, however, has wavelengths different from that of the incident light; its presence is a result of the Raman Effect.

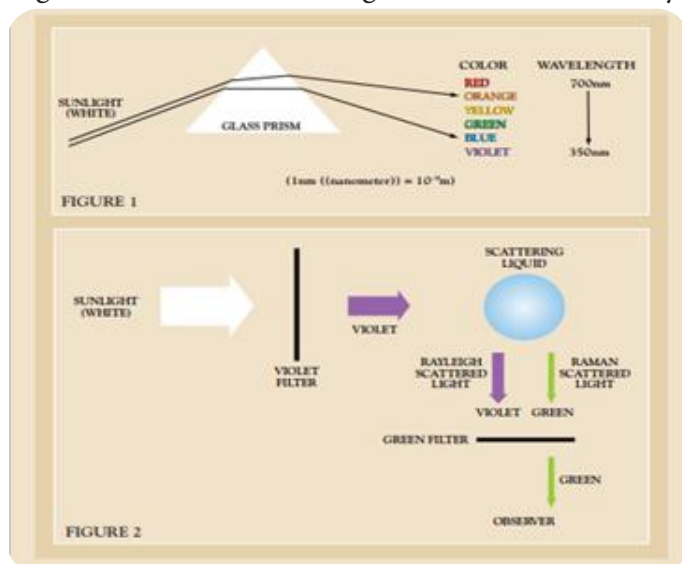


## Raman Effect as the Physicist's Tool

The significance of the Raman Effect was recognized quickly by other scientists. Professor R. W. Wood of Johns Hopkins cabled Nature to report that he had verified Raman's “brilliant and surprising discovery ... in every particular. It appears to me that this very beautiful discovery which resulted from Raman's long and patient study of the phenomenon of light scattering is one of the most convincing proofs of the quantum theory.”

Raman had also recognized that his discovery was important to the debate in physics over the new quantum theory, because an explanation of the new radiation required the use of photons and their change in energy as they interacted with the atoms in a particular molecule. Raman also knew that there was a more important result, remarking in his 1930 Nobel Prize address that “... the character of the scattered radiations enables us to obtain an insight into the ultimate structure of the scattering substance.”

In the first seven years after its discovery, the Raman Effect was the subject of more than 700 papers in the scientific literature, mostly by physicists who were using the technique to study the vibration and rotation of molecules and relating those phenomena to the molecular structure. Then, as noted by Raman biographer G. Venkataraman, there was a decline in interest, as “the first bloom of novelty had worn off and physicists were satisfied



that they understood the origin of the effect.” At the same time, chemists became interested in the Raman Effect as an analytical tool. In James Hibben’s words, “The Raman Effect became the adopted child of chemistry.”

### Raman Effect as a Chemist’s Tool

By the late 1930s the Raman Effect had become the principal method of nondestructive chemical analysis for both organic and inorganic compounds. The unique spectrum of Raman scattered light for any particular substance served as a “fingerprint” that could be used for qualitative analysis, even in a mixture of materials. Further, the intensity of the spectral lines was related to the amount of the substance. Raman spectroscopy could be applied not only to liquids but also to gases and solids. And unlike many other analytical methods, it could be applied easily to the analysis of aqueous solutions. It was a ubiquitous technique, giving information on what and how much was present in a plethora of samples.

The use of Raman spectroscopy as a basic analytical tool changed sharply after World War II. During the war, infrared spectroscopy was enhanced by the development of sensitive detectors and advances in electronics. Infrared measurements quickly became routine operations, while Raman measurements still required skilled operators and darkroom facilities.

Raman spectroscopy could no longer compete with infrared until another development in physics — the laser — revived Raman spectroscopy in a new form beginning in the 1960s.



Although Raman’s original experiments were done by visual observation, precise measurements were made with this quartz spectrograph and first made public by Raman in a lecture in Bangalore on March 16, 1928. (Courtesy the Indian Association for the Cultivation of Science.)

### The Laser and Raman Spectroscopy

Raman understood the need for more intense light sources to amplify the effect and observation of the scattered light. The laser provided an even more intense source of light that not only could serve as a probe exploring the properties of the molecule but could also induce dramatically new effects.

With the development of the Fourier transform (FT) technique and the application of computers for data handling, commercial FT-Raman spectrometers became available in the late 1980s, resulting in resurgence in the use of the original Raman Effect.

The new Raman spectroscopy has been used to monitor manufacturing processes in the petrochemical and pharmaceutical industries. Illegal drugs captured at a crime scene can be analyzed rapidly without breaking the evidence seal on the plastic bag. Chemists can watch paint dry and understand what reactions are occurring as the paint hardens. Using a fiber-optic probe, they can analyze nuclear waste material from a safe distance. Photochemists and photobiologists are using laser Raman techniques to record the spectra of transient chemical species with lifetimes as small as 10-11 seconds. Surface-enhanced Raman spectroscopy is used for studying surfaces and reactions on surfaces. And, according to Kathy Kincade, Raman spectroscopy “has the ability to provide specific biochemical information that may foreshadow the onset of cancer and other life-threatening illnesses.”

In his 1928 talk in Bangalore, Raman concluded, “We are obviously only at the fringe of a fascinating new region of experimental research which promises to throw light on diverse problems relating to radiation and wave theory, X-ray optics, atomic and molecular spectra, fluorescence and scattering, thermodynamics, and chemistry. It all remains to be worked out.”

Seventy years later scientists are still actively working out the results and practical applications of Raman’s deceptively simple experiment.

### Biography of Sir C.V. Raman

(07 November 1888 - 21 November 1970)

He received a B.A. degree from Presidency College in Madras at the age of 16, placing first in his class and receiving a gold medal in physics. While studying for his M.A. degree, he published his first

research paper in Philosophical Magazine at the age of 18. It was the first research paper ever published from Presidency College. Because of poor health, he was unable to go to England for further education. With nothing else available in India, in 1907 he passed the Financial Civil Service exam, married, and was posted to Calcutta as assistant accountant general. Shortly after arriving in Calcutta, Raman began after-hours research at the Indian Association for the Cultivation of Science (IACS). In the first 10 years, working almost alone, he published 27 research papers and led the way for the IACS to become recognized as a vibrant research institute. Much of this early work was on the theory of vibrations as it related to musical instruments. After brief postings in Rangoon and Nagpur, he returned to Calcutta, took up residence next door to the IACS, and constructed a door that led directly into the institute, giving him access at any time. He received research prizes in 1912 and 1913 while he was still a full-time civil servant. He also increased the IACS reputation with his extensive lectures in popular science, holding the audience spellbound with his booming voice, lively demonstrations, superb diction and rich humor. At the age of 29 he resigned from his lucrative civil service job when Sir Ashutosh Mukherjee, vice-chancellor, Calcutta University, offered him the Palit Chair Professorship. He continued to lecture even though it was not required, and he used the IACS as the research arm of the university. By the time of his first visit to England in 1921, his reputation in physics was well known. Three years later he was elected a Fellow of the Royal Society — only the fourth Indian so honored. That same year he toured the United States, spending four months at the California Institute of Technology through the invitation of Nobel Laureate Robert Millikan. After discovering the Raman Effect in 1928, he was knighted by the British government in India and received the Nobel Prize in physics in 1930. Three years later, Raman left Calcutta for Bangalore, where he served as head of the Indian Institute of Science. There he continued his work on the Raman Effect and became interested in the structure of crystals, especially diamond. In 1934 he founded the Indian Academy of Science and began the publication of its Proceedings. In 1948 he became director of the newly constructed Raman Research Institute, where he remained continually active, delivering his last lecture just two weeks before his death. His research interests changed in later years when he primarily investigated the perception

of color. Jagdish Mehra, a biographer, states, “Educated entirely in India, Raman did outstanding work at a time when the small Indian community worked almost entirely in isolation and few made science a career. In fostering Indian science, Raman emerged as one of the heroes of the Indian political and cultural renaissance, along with ... Mahatma Gandhi and Jawaharlal Nehru.” But as **Raman himself once said, outstanding investigators “are claimed as nationals by one or another of many different countries. Yet in the truest sense they belong to the whole world.”**

### NSD 2023

The theme of NSD-2023 is **“Global Science for Global Wellbeing”**. The Global Science for Global Wellbeing theme has been chosen for the purpose of raising public appreciation of the scientific issues in global context which is having a bearing upon global wellbeing.

The four fold approach of integration would consist of

- integration of all the scientific departments which can work on theme based approach;
- extended scientific integration encompassing engineering, medical and other institutions;
- extra scientific integration involving identification of the needs of other ministries like jal shakti, railways etc; and
- extended science driven all inclusive approach integrating startups & industry.

National Council for Science & Technology Communication (NCSTC) of Department of Science & Technology (DST) is nodal agency to support catalyze and coordinate celebration of the NSD throughout the country, particularly in scientific institutions & research laboratories.

NCSTC has supported various programmes countrywide by supporting its State S&T Councils & Departments for organization of lectures, quizzes, open houses, etc.

### Citations

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2. <https://vikaspedia.in/education/childrens-corner/important-days/national-science-day>.

## “Project proposals for DST” an interaction program by Directorate of Sponsored Research @ JNTUA College of Engineering Ananthapuramu on 14-02-2023

Directorate of Sponsored Research has organised an interactive session with Research advisor of JNTUA, Ananthapuramu Dr.D.R. Prasada Raju, Scientist-G (Rtd.) DST on **February 14<sup>th</sup>, 2023**. Faculty and Heads of the Departments interacted with him regarding the submission

of research proposals for DST- Core Research Grant. Dr. Prsada Raju reviewed the proposals prepared by faculty and has given suggestions to improve upon. He also discussed regarding the Summer Internships being offered by IIT-Hyderabad and IIT-Tirupati for 2<sup>nd</sup>/3<sup>rd</sup> B.Tech students.



## National Science Day celebrations @ Ananthapuramu

ON 28-02-2023

Under the Society Outreach Initiative, on the eve of **National Science Day**, Dr. R. PadmaSuvarna, Professor of Physics conducted an awareness program for the students of Netaji Subhas Chandra Bose Municipal Corporation High School, Ananthapur on **28-02-2023**. On this occasion,

importance of Science Day and Raman Effect was explained. Demonstrated experiments related to induction of charges and Pressure. Distributed prizes for the winners of essay writing and elocution competitions conducted on the theme of the Nation Science Day “Global science for Global Wellbeing”.



# “Chemical Engineering in Daily Life”

- Mr. M. Venkatesh, Scientific Officer, BARC, Kalpakkam, Tamilnadu

## IChE Lecture Series (Lecture- I)

Indian Institute of Chemical Engineers - Hyderabad Regional Centre (IChE-HRC)

Organised by

IChE Student Chapter of Department of Chemical Engineering,  
JNTUA CEA, Ananthapuramu.

Online Lecture on 25<sup>th</sup> February, 2023 at 2:30 PM

### About IChE-HRC

The Indian Institute of Chemical Engineers with its head office at Kolkata and its 33 Regional Centers

spread throughout the country holds national and international seminars, workshops and the Institute are

- To promote the advancement of chemical engineering science
- To maintain professional standards among its members

Further, it serves as authoritative body on matters concerning the teaching and profession of chemical engineering and also publishes journals. The institute conducts examinations grants, awards donations, scholarships and certificates to such persons as may be deemed fit. The Hyderabad Regional Centre with its office at Amrutha Estates, Himayat Nagar has involved in many activities such as organizing seminars and lectures, conducting industrial tours etc. it has successfully conducted the 23rd and 39th Annual Indian Chemical Engineering congress in the years 1970 and 1986 respectively.

### About Speaker

Mr. Mondy Venkatesh is a Scientific Officer-D, BARC, Kalpakkam, Tamil Nadu. He is having eight years of experience in BHABHA ATOMIC RESEARCH CENTRE, KALPAKKAM. He is the alumnus of Chemical Engineering Department (Batch 2009- 2013).

### About Event

The event was held on 25<sup>th</sup> Feb, 2023. The whole event was hosted by Ms. H Rehana Anjum, Assistant professor (Ad-hoc), Department of chemical engineering, JNTUCEA. Firstly, she welcomed all the members to the event and specially she invit-

ed the speaker, faculty and students. Next the speaker is addressed by Dr. B. Dilip Kumar. The next followed by Ms. Heera Nikhath, studying 3rd year B. Tech in chemical engineering. She has given a brief introduction about the speaker, the series topic etc. The main lecture series about “**THE CHEMICAL ENGINEERING IN DAILY LIFE**” was started by the speaker Mr. Mondy Venkatesh. After the completion of the lecture series there is question and answer session. After that the program was ended by K. Sai Deeksha, 3rd year B. Tech in chemical engineering by telling the vote of thanks.

### About the Lecture

The main motto of this lecture series is to learn and understand the concept on of Chemical Engineering in Daily Life. Chemical engineering is an engineering field which deals with the study of operation and design of chemical plants as well as methods of improving production. Chemical engineers develop economical commercial processes to convert raw materials into useful products. Chemical engineering uses principles of chemistry, physics, mathematics, biology, and economics to efficiently use, produce, design, transport and transform energy and materials. The work of chemical engineers can range from the utilization of nanotechnology and nanomaterials in the laboratory to large-scale industrial processes that convert chemicals, raw materials, living cells, microorganisms, and energy into useful forms and products. Chemical engineers are involved in many aspects of plant design and operation, including safety and hazard assessments, process design and analysis, modelling, control engineering, chemical reaction engineering, nuclear engineering, biological engineering, construction specification, and operating instructions.

## Some examples of Chemical Engineering in our daily life:

### Material/ Mass Balance (Without chemical reaction)

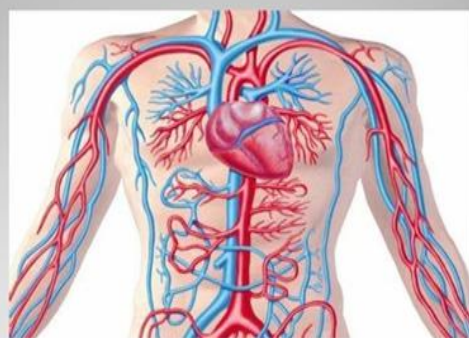
$$(\text{Rate of Mass})_{\text{in}} - (\text{Rate of Mass})_{\text{out}} = (\text{Rate of Mass})_{\text{accumulated}}$$

### Heat Balance (Without chemical reaction and losses)

$$(\text{Rate of Heat})_{\text{in}} - (\text{Rate of Heat})_{\text{out}} = (\text{Rate of Heat})_{\text{accumulated}}$$

- Many process industries and manufacturing industries have the application of material balances and heat balances.
- In real life we can find fluid mechanics, when we take the biological body the blood that is flowing through our veins have definite velocity and exert pressure at different conditions.
- When we wake up, we yawn sometimes, when the blood contains excessive CO<sub>2</sub>, to expel that and to inhale oxygen yawn happen. Particularly when these chemicals (serotonin, glutamic acid, and nitric oxide) are activated in brain, yawning increases - Chemical engineering.
- We use toothpaste, it does not follow Newton's Law of Viscosity - Non-Newtonian fluid - Chemical engineering.
- We drink ice added lemon juice, the heat melts the ice cube and phase transition increases the taste of the juice - Chemical engineering.
- You bring your finger nearby tap water flow of fluid jet attaches itself to a nearby surface- Coanda effect - Chemical engineering.
- You boil milk, It's a combination of tiny fat molecules and liquids. Entrapped vaporized air makes the fat layer overflow - Chemical engineering.
- We peel the onion it makes us cry because of chemical irritant known as synpropanetriol- S-oxide which act as lachrymatory agent – Chemical Engineering.

our fluid mechanics



## Recent Chemical engineering Applications

- Researchers at Rensselaer Polytechnic Institute have created a practical method for producing N95 face masks that are both excellent germ barriers and on-contact germ killers. The antiviral and antibacterial masks may be worn for longer periods of time, which would result in less plastic waste as the masks would not need to be replaced as often.
- The research on Advanced Biomolecular Recognition development of a novel biochemical nanomachine that penetrates the cell membrane and kills the cell via the molecular movements of folding and unfolding in certain cellular environments, such as cancer cells.
- A new study by Vanderbilt researchers demonstrates the ability to initiate chemical reactions by cooling materials instead of heating them — a counterintuitive process that could open new vistas for applications ranging from monitoring shipping conditions to developing smart clothing that guards against dangerously low temperatures.
- Rice University chemical engineers have improved their design for a light-powered catalyst that rapidly breaks down PFOA, one of the world's most problematic “forever chemical” pollutants.
- Researchers at the Lawrence Berkeley Lab have found a way to generate an alternative jet fuel by harvesting an unusual carbon molecule produced by the metabolic process of bacteria commonly found in soil.



- A new enzyme variant can break down environment-throttling plastics that typically take centuries to degrade in just a matter of hours to days. It was created by chemical engineers and scientists at The University of Texas at Austin.

- Researchers at KI and SLU have discovered that spider silk proteins can be fused to biologically active proteins and be converted into a gel at body temperature. One of the goals is to develop an injectable protein solution that forms a gel inside the body, which could be used in tissue engineering and for drug release, but also make gels that can streamline chemical processes where enzymes are used.

The main role of chemical engineers is to design and troubleshoot processes for the production of chemicals, fuels, foods, pharmaceuticals, and biologicals, to name just a few. They are

most often employed by large-scale manufacturing plants to maximize productivity and product quality while minimizing costs. Chemical engineering is most often found in large-scale manufacturing plants, where the goal is to maximize productivity and product quality while minimizing costs. The aerospace, automotive, biomedical, electronic, environmental, medical, and military industries use chemical engineering to develop and improve their technical products.

The chemical engineering profession evolved from society's need for products and energy. Today and into the future, chemical and bioengineers will continue to meet society's needs using their process knowledge, their knowledge of fundamental science, and their problem-solving skills.



IChE Logo



IChE HRC Logo



IChE Special Logo celebrating 75 years

### About the Speaker



Mr. Mondy Venkatesh is a Scientific Officer-D, BARC, Kalpakkam, Tamil Nadu. He is having eight years of experience in BHABHA ATOMIC RESEARCH CENTRE, KALPAKKAM. He has completed his B. Tech in Chemical Engineering in JNTUACEA in the year 2013. His role in BARC as Scientific Officer-D is operate and manage scientific equipment and scientific processes in support of others' research or teaching, he is responsible for the use and management of laboratory space. He trains others in the use of scientific equipment and processes. He assists researchers with experimental design.

# FRESHERS DAY @ School of Management Studies, JNTUA Ananthapuramu on 25-02-2023

Hon'ble Vice-Chancellor Prof. G.Ranga Janardhana was the Chief Guest at Freshers Day Celebrations of School of Management Studies, JNTUA, Ananthapuramu on 25.02.2023. Prof. T. Narayana

Reddy, Head of the Department, Prof. B. Joji Reddy, Secretary Sports Council, teaching, non-teaching staff and students attended the program.





# Two Days Hands-on Workshop on “VEGA Processors and Ecosystem” Department of CSE JNTUA CEA in association with C-DAC Thiruvananthapuram & JNTUA Alumni 1979-83 25 & 26 February 2023

JNTUA College of Engineering Ananthapuram Department of Computer Science & Engineering conducted a two day workshop “India’s Indigenous Vega Processors and Ecosystem” on 25-02-2023 and 26-02-2023. Vice Chancellor attended the workshop as the chief guest and started the program by lighting the lamp. Later the Vice Chancellor said that 10 to 80 percent of the syllabus in German Universities is based on industries and every student tries to develop a new product. He said that we have also made many changes in the university syllabus. Community service project and internship have been introduced to the students, he said. Apart from that students are asked to enroll for various subjects online. He said that the students can become strong in the basics by attending workshops. Apart from that, the students should become conversant with the latest technology. He also mentioned that students have to come up with innovative ideas and share them with

the world. He also added that currently semi-conductor industry has gained top priority.

This technical education workshop on the processor developed by the Center for Development of Advanced Computing (C-DAC) Thiruvanthapuram, Kerala has been organized by the Department of CSE, JNTUA CEA with the help from Alumni of 1979-83 batch., The workshop was attended by 10 engineering college lecturers and 60 students from the department participated in this workshop. All participants of this workshop received certificates. Dr. K. Madhavi Head of CSE Department and Dr. Vishnu Vardhan HoD ECE, are the coordinators for the program. College Principal Prof. P. Sujatha, Vice Principal Prof. R. Bhavani, teaching staff, 1979-83 batch Alumni P. Satyanarayana, Sri Ramananth Desai, Ms. Neeta and Mr. Salin from C-DAC Thiruvananthapuram participated as guests.



# Five Day Faculty Development Program on “Enterprise AI” by Department of CSE, JNTUA CEA in association with Indian Society for Technical Education (ISTE) A.P. (28th February to 04th March 2023)

Hon'ble Vice Chancellor Prof. G. Ranga Janardhana inaugurated the program by lighting the traditional lamp. The vice-chancellor paid floral tributes to Sir C.V. Raman by garlanding his portrait. Later, the vice-chancellor said that by attending workshops, teachers can enhance their knowledge. He said that “Artificial Intelligence” (AI) is increasingly being used by everyone, taught by the Computer Science Department, has been introduced for other engineering branches too. Training programs are very much necessary for the teachers who are teaching them. Every teacher is advised to learn new things and update one self with latest technology. Mr. Ganeshan Naryana swamy, the guest

of honor for this program, said that the AI systems have become essential in the banking and financial sector. Apart from this, he said that this technology has a lot of application in the field of health care and manufacturing sector and this programs helps in gaining hands-on experience. Prof. B. Eswar Reddy, Director of Faculty Development explained the importance of this program. Principal of the college Prof. P. Sujatha presided over the workshop. Dr. K. Madhavi is the converner and Dr. A.P. Shiva Kumar is the co-ordinator. OSD to VC Prof. Devanna, Prof. P.R. Bhanumurthy, teaching staff and faculty from various constituent and affliated colleges participated in the program.



# Five Days Hands-on Workshop on “Internet of Things (IoT): Technologies, Protocols & Applications”

Up-Skilling program for SC and ST students

28<sup>th</sup> February to 4<sup>th</sup> March 2023

by ECE Department, JNTUA CEA Ananthapuramu

Supported by Ministry of Electronics and Information Technology (MeitY), Government of India.

Department of Electronics and Communication Engineering, JNTUA College of Engineering Anantapuramu, in association with IEEE (Institute of Electrical & Electronics Engineers) and C-DAC (Centre for Development of Advanced computing) Bangalore held 5 days hands on workshop starting on 28th February on “IoT: Internet of Things, Technologies Protocols and Applications” an up skilling program for SC & ST students. The workshop was inaugurated by Hon’ble Vice Chancellor Prof. G. Ranga Janardhana by lighting of the lamp. This workshop was sponsored by MeitY (Ministry of Electronics and Information Technology),

Government of India. Later, Vice Chancellor Prof. G. Ranga Janardhana said that by organizing such a workshop the students have a chance to further develop their knowledge. He said that if the students are trained on this latest technology, they can go further especially as Internet of Things is being used in every field. In particular the IoT ‘Kit’ will be given to the students for free, and the students shall experience wonders through the kit. He advised the students to bring their ideas into product form. The guest of honor for this program Mr. Pramod Kumar, Senior IEEE Member said that students should take advantage of such workshops. He said that students can get practical knowledge by giving hands on experience training. He said that 5 colleges in the country have been selected for this training program and JNTU Anantapur College is one among them. Principal of the college Prof. P. Sujatha presided over the inaugural. Dr. D. Vishnu Vardhan HoD ECE was the convener, and Dr. G. Mamatha acted as the coordinator, C-DAC Bangalore team, Vice-Principal Prof. R. Bhavani, Prof. V. Sumalatha, Prof. P.R. Bhanu Murthy, Prof. P. Ramana Reddy, teaching staff, and students participated in this program.



## College of Engineering Anantapur Alumni (1989-93) (Boys) make donation for renovation of Shilpa Hostel of JNTUA CEA on 03-02-2023



**A**lumni of JNTU Anantapur Engineering College (1989-93) batch (Boys) have made a donation of Rs. 4,68,000/- (Rupees Four Lakh Sixty Eight Thousands) only. Speaking on the occasion Vice Chancellor Prof. G. Ranga Janardhana said that University and the College can be developed further with the support of Alumni. Alumnus Sri. N. Raghavendra said that 1989-93 Alumni boys have

contributed this amount and this donation shall be used for the renovation of ladies hostel Shilpa. Registrar Prof. C. Sashidhar, Directors Prof. V. Sumalatha, Prof. Shoba Bindu, Prof. Kiranmayi, Prof. K. Subba Reddy, College Principal Prof. P. Sujatha and former students Smt. Mohana, Sri Ashok and Dr. R. Srikanth were present.



## Anantapur Engineering College Alumni (1958-63) Reunion (08.02.2023 – 10.02.2023).

JNTUA CEA Alumni reunion of 1958-63 batch meeting was held on 09-02-2023. In the seminar hall of Department of Electrical & Electronics Engineering, Vice Chancellor Prof. G. Ranga Janardhana was the chief guest of this reunion. Prof. Ranga Janardhana started the program by lighting the Jyothi. Later the Vice Chancellor said that with the help of Alumni the college and University will advance further. He said that the college will take their suggestions and advise. Further the Vice Chancellor said that the alumni should share their experiences and give suggestions to the students who are studying now. He said that the students who have studied in this college have held top posts. He lauded the alumni for providing support to the college.

Mr. Shankar Reddy, President of the Alumni (1958-73) batch who participated in this program said that we will always support the development of

the college. He said that this college has grown to a great level and this reunion is for three days from 08-02-2023 to 10-02-2023.

Another alumnus Prof. K. Balaveera Reddy former Vice Chancellor VTU Belgaum, Karnataka said that the alumni of this college are like ambassadors. He said that there will be support for further development of the college.

Another former student Mr. Balakrishna Murthy spoke on how the college can be developed through Japanese technology. Principal of the college Prof. P. Sujatha presided. About 50 former students participated in this program. Registrar Prof. C. Sashidhar, University Directors, Prof. D. Sai Baba Reddy, Prof. H. Sudarsana Rao, Prof. Keshav Reddy, 1958-63 batch alumni Mr. Bhushan Goud, Mr. Shiva Ramakrishna, Mr. Janardhana Reddy and others participated in the program.



# Glimpses of 1958 - 63 Alumni Reunion

@ JNTUA CEA on 09-02-2023



# FRESHERS DAY @ Oil Technological and Pharmaceutical Research Institute (OTPRI), JNTUA Ananthapuramu on 10-02-2023.

A 'Freshers cum Farewell' party for Food Technology and Management students was grandly organized on 10-02-2023 at Oil Technological and Pharmaceutical Research Institute (OTPRI) Ananthapuramu, affiliated to JNTU Anantapur University.

Vice Chancellor Prof. G. Ranga Janardhana was the chief guest for this program. Registrar Prof. C. Sashidhar was the special guest. Prof. G. Ranga Janradhana started the program by lighting the lamp. The Vice Chancellor addressed the students about the greatness of Food Technology and time Management. He said that they should always remember the teachers who are responsible for their success and urged the students who are currently enrolled in the college to pursue education with discipline and strive to reach higher heights and to establish healthy practices in the way of human life. He said that awareness should be increased on the latest technology and quality of service.

Later, the special guest Registrar Prof. C. Sashidhar explained the history of OTPRI, the uniqueness of the Food Technology course, the development and progress, the role of food technology in the society, and explained that there are good employment opportunities in the field of food technology and students should take advantage of them. He added that the student should be diligent and should constantly research on new things and improve their knowledge.

Next OTPRI Director Prof. B. Durga Prasad welcomed the student of Food Technology and Management and bid farewell to the students of the academic year 2021. He suggested that seniors and juniors should interact with each other without discrimination. Afterwards all the students participated in the cultural program and expressed their happiness.

Principal Dr. C. Gopinath, Prof. Swaroopa Rani, Dr. Sri Jeevan, Dr. N. Vijayalakshmi, Dr. Sandhya Rani, teaching and non teaching staff participated in the program.





## COLLEGE DAY celebrations @ Oil Technological and Pharmaceutical Research Institute (OTPRI), JNTUA Ananthapuramu on 25-02-2023.

Oil Technological and Pharmaceutical Research Institute (OTPRI) Ananthapuramu, affiliated to JNTU Anantapur grandly organized its anniversary celebrations on **25<sup>th</sup> February**. Special guest Vice Chancellor Prof. G. Ranga Janardhana attended and started the program by lighting of the lamp. On this occasion the Vice Chancellor said students should be hardworking work focused to reach high position in life. He said that there are ample job opportunities for pharmacy students.

In his welcome speech, OTPRI Director Prof. B. Durga Prasad explained the progress achieved by the college in the last six months by providing all the necessary facilities to the students and especially by signing agreements with leading multinational com-

panies so that students don't have struggle for jobs after leaving the college.

Later guests of honor National Level Badminton Player Mr. Srikanth Reddy, Ms. Neela Ramana and Ms. Gayatri Ramana, classical dancers and alumni of JNTU addressed the students. Prizes were awarded to the students who excelled in various sports competitions.

Director Prof. B. Durga Prasad, Principal Dr. C. Gopinath, Secretary Sports Council of JNTUA Prof. B. Joji Reddy, badminton player Mr. Srikanth Reddy, famous dancers and film actresses Ms. Neela Ramana and Ms. Gayatri Ramana alumni of JNTUA, teaching and non teaching staff participated in this program.



# A Report on An Online Event on Semicon India Future Design conducted by IISc Bangalore on 24-02-2023 and attended by II & III Year Mechanical Engineering Students of JNTUA College of Engineering, Pulivendula

1	Name of the Program	: An Online Event on Semicon India Future Design
2	Venue	: IISC Bangalore, Karnataka-560012
3	Date	: 24/02/2023
4	Organized at	: II B.Tech students class room for III B.Tech-II SEM & II B.Tech II SEM Mechanical Students
5	Name of Department	: MECHANICAL ENGINEERING
6	Title of the Event	: SEMICON INDIA FUTURE DESIGN

## 1. Brief Description of Industrial Event

Semiconductors are at the heart of all electronic products and constitute a significant share in the Bill of Material (BOM). The National Policy on Electronics 2019 aims to position India as a global hub for Electronics System Design and Manufacturing (ESDM) and envisions creation of a vibrant semiconductor chip design ecosystem in the country. With an exceptional talent pool of 20% of world's semiconductor design engineers and thousands of chips designed by them every year in the country, India is poised for growth to achieve self reliance and technology leadership in semiconductor design sector.

Ministry of Electronics and Information technology has announced the Design Linked Incentive (DLI) Scheme to offset the disabilities in the domestic industry involved in semiconductor design in order to not only move up in value-chain but also strengthen the semiconductor chip design ecosystem in the country. CDAC is responsible for implementation of the DLI Scheme as Nodal Agency.

The Design Linked Incentive (DLI) Scheme aims to offer financial incentives as well as design infrastructure support across various stages of development and deployment of semiconductor design(s) for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design(s) over a period of 5 years.

During this event, the Minister will also inaugurate the ChipIN Centre at C-DAC, Bangalore and dedicate its services to semiconductor design community of the country. ChipIN Centre is one of the biggest of existing facilities, offering plethora of de-

sign flows, aims to bring the chip design infrastructure at door-steps of entire semiconductor design community in the country. It is a centralized design facility, not only hosting the most advanced tools for entire chip design cycle (i.e. Front-end design, Back-end design, PCB design & analysis etc. for Digital, Analog, RF & Mixed Signal designs), going up to 5nm or advanced node but also provide aggregate services for fabrication of design at SCL foundry & overseas foundries and packaging. It will also enable an arrangement of instructor-led/ online trainings on design flows by industry professionals.

Taking advantage of this, several academic start-ups will mushroom across the country, cross the initial entry barriers and pave the way for entrepreneurship/ startup-led design & innovations ecosystem in the country making indigenous IP Cores, Chips, System on Chip (SoCs), Systems for different application areas like 5G/ IoT, AI/ ML, Automotive & Mobility sector etc. in India, for the World.

## Objectives

- Stimulate the next-generation Semiconductor Designers
- Promote the culture of Co-development and joint ownership of IPs with active industry participation
- Indigenously Develop Semiconductor Chips for Automobile, Mobility, Communication & Computing.
- Nurturing and facilitating the growth of the domestic companies, start-ups and MSMEs.
- Achieving significant indigenization in semi

conductor content and IPs involved in the electronic products deployed in the country, thereby facilitating import substitution and value addition in electronics sector.

- Strengthening and facilitating access to semi conductor design infrastructure for the start-ups and MSMEs.
- The event was inaugurated by Hon'ble Prime Minister of India, Shri Narendra Modi via video conference on 24<sup>th</sup> February, 2023 at 9:30 AM.
- The event brings together global leaders from industry, Academia and Research Institutions.
- The Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship, Sri Rajeev Chandrasekhar spoke about three trends that are currently visible, "First, there has been acceleration in digitalization and governments around the world are digitizing rapidly. Secondly, we are at an inflection point, and third, for the world, New India is becoming a trusted partner in terms of delivering talent, global products, digital products and services."
- The steering Committee for Semicon India future design event 2023 includes a mix of Start-ups, Academia and Global industry leaders demonstrating the Government's collaborative approach towards powering India's semi conductor and electronics manufacturing ambitions.

- The conference serves as the formal launch pad of India's semi conductor strategy and policy which envisions making India a global hub for Electronic system design and manufacturing.

- The startups are Vervesemi Microelectronics Pvt. Ltd, Fermionic Design Pvt. Ltd. and DV2JS Innovation Ltd. The CEOs of these startups had interactions with several industry leaders including Dr Sailesh Chittipeddi, President, GM and Board member Renesas Electronics and Mr Anand Ramamoorthy, MD, Micron Technology India.

- The Scheme aims to offer financial incentives as well as design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design over a period of five years.

- The Head of the Department organized this online event in II B.Tech Class room (C-201). The students of III B.Tech II semester & II B.Tech II semester watch this event through online by placing projector in this room and they are feeling happy for organizing this event and they express heartfelt thanks to event organizers and they express this content is very useful for his/her career in future days.

### Event Photographs



# A Report on Industrial visit by III Year Mechanical Engineering Students of JNTUA College of Engineering, Pulivendula.

Date : 26-02-2023

- 1 Name of the Program : A **One day Industrial Visit** at **NANDI PVC EXTRUSIONS**
- 2 Venue : AP INDUSTRIAL PARK, MYDUKUR ROAD, PRODDATUR
- 3 Date : **26/02/2023** [2:45PM – 5:30 PM]
- 4 Organized by : **Department of Mechanical Engineering, JNTUACEP**
- 5 Department : Mechanical Engineering
- 6 No. of students participated : **53** students of III B.Tech- II Semester
- 7 Faculty members attended : **02** ( **Mr. C.Chandrasekhar Reddy** Assistant Professor(Adhoc), **Mr.S.Prateep Kumar** Assistant Professor(Adhoc)

## 1. Brief Description of Industrial Visit

On February 26/02/2023, all the students from Mechanical engineering Department have visited an industrial NANDI PVC EXTRUSION at Proddatur for knowing about how the PVC extrusion will be happened in that Industry.

Fifty three students and two faculty members C.Chandrasekhar Reddy Assistant Professor (Adhoc), S.Prateep Kumar Assistant Professor (Adhoc) have visited the industry. The main purpose of this industry visit is to know about various instruments in that industry and how the PVC EXTRUSION will be happened at that plant.

## 2. Plant overview Visit

First of all we along with students are reached to the industry by bus around 2:45 PM. The welcome was given by B.Siva Kumar Reddy Managing partner of NANDI PVC Extrusions has given the permission for visiting the this industry.

After entering into the industry, first we interact with the managing director and he asks the basic questions regarding moulding, blow moulding, extrusion, roller moulding and he gave valuable information about that concepts and he showed some extrusion door products to the students. After this he divided the total students into three batches and for each batch he spends some valuable time and showed the important instruments along with him for every student in that batch.

First of all, he told about total aerial view of the industry after that we entering into main section in that we saw the PVC Grinder mixture which is operated at high temperature. In this machine we

saw they are mixing PVC S-65D RESIN, some mixture chips, calcium carbonate microcal-5C, along with pigment is poured into the mixture grinding machine and they will make a resin powder which helpful for making PVC doors resin.

Next we are entering into the processing machine, in this he explained how the resin powder with some chemical is sucked into processing machine with automatic operator after that he explained barrel, gear rod extrusion machine and how it should be fitted in to the barrel, die casting shape mechanism, water filling plant, wood chain mechanism operated by automatic mechanism, lastly the end product mechanism along with cutting machine. in this section we observed practically how the machines operated and how the end PVC door resin product will be manufactured and after manufacturing they store all manufacturing products into packing.

After the end product he explained some wood print design machine and how they are operated and how the design is printed on the surface PVC Door resin product and lastly they are laminated this product with laminated printing unit and packed all of this and how it sent to the customers. He shares all the information about the whole product with students. If any end product is mismatched and damaged then again it will be sent to the grinder pulverized machine and make it into small chips and use again and again.

Lastly, he showed some beautiful end PVC door products which are ready to send to the customers. Like this the remaining two batches also he explained some valuable information about regard

ing the whole instruments and how the extrusion process can be done. In this time visit to the industry he and his workers and partners explained about whole mechanism with lot of patience and completed the session of visit.

### 3. Experience gathered by the students

From overall visit from this industry we will gather the following information about different instruments from this industry.

- What type resin powder, chemicals, chips and pigments are used for making PVC Door resin product.
- We know about the type of dies they are used for different products. They showed two types dies to us.
- We gather some practical knowledge with respect to how the resin powder from processing machine is converted into extrusion part.
- Initially the product before reaching water filling machine it is dry and not hard. We practically see when the product enters into water filling machine it becomes hard.
- We gain some practical information about end product cut by same size with the cutter machine automatically by providing some pneumatics applied on that machine.
- Lastly we see how the end product is installed at door end sides and how it will be fitted in to the

product and we see some PVC door resin products with different designs.

### 4. Conclusion:

- The Industrial visit helped us to know about how small scale mechanical industries will work and how they are manufacturing PVC Door products with the help of some mechanisms. It also helped us and gained some practical knowledge about various types of instruments. This session not only gave us the knowledge required but also motivated us to implement some new ideas in future.

**Lastly we are expressing our sincere thanks to**

- Sri.B.Siva Kumar Reddy, Managing Partner of Nandi PVC Extrusions, for giving this opportunity and also explain all the information with us in practical manner.
- Sri. Govardhan Reddy, Managing partner, Sri. M.Vijay kumar technical instructor for sharing valuable information regarding the whole industry.
- Dr. S. Vasundra, Principal, JNTUACEP for giving permission for industrial visit.
- Dr. V.Venugopal Reddy, Professor & Head of the Mechanical Engineering, for motivating us and also for giving the permission from the Industry MD.
- Mr. C.Chandrasekhar Reddy, Assistant professor (Adhoc), Mr.S.Prateep Kumar Assistant Professor(Adhoc) for guiding us throughout the entire visit.

### Event Photographs



## Prof. H. Sudarsana Rao & Vaishali G. Ghorpade of JNT University Anantapur Awarded Indian Patent for Self-healing Bacterial Concrete

Prof. H. Sudarsana Rao faculty of Civil Engineering, JNTUA College of Engineering, Ananthapuramu published a patent 'Method for preparation of bacterial concrete with self-healing abilities and products thereof' Indian patent No. 417107. Led by H. Sudarsana Rao, Professor Vaishali G Ghorpade, and research scholar Ramesh Vattikundala have filed for the patent. The bacterial concrete prepared using the method exhibits good self-healing

of cracks along with improved compressive strength and improved strength regain ability as compared with normal concrete and concrete repaired with other technologies, said Prof. H Sudarsana Rao. Bacillus bacterial species from sewage habitats are employed for making the concrete which is a mixture of cement and water, and aggregates. The paste coats the surface of the aggregates.

### About the Patentees



Dr H Sudarsana Rao is a Professor of Civil Engineering, JNTUA College of Engineering Anantapur. He served the University in several capacities. He is actively involved in research in the field of application of Artificial Neural Networks, structural analysis using FEA, fiber reinforced concretes; Slurry infiltrated fibrous concrete, high performance concrete, low cost housing materials and techniques. He has published several research articles. He has guided several research scholars for their doctorates, and masters degrees. He authored several books and is reviewer for American Concrete Institute-Materials, Structural Engineering Journals, Journal of Material Science and Engineering. He has received the Best Teacher Award from A.P State Government, and several national and international awards.



Dr Vaishali Ghorpade is a Professor of Civil Engineering at JNTUA College of Engineering, Ananthapuramu. Her research areas include High-performance-concrete, Fibre Reinforced Concretes, Glass Fibre Reinforced Concretes, Slurry Infiltrated Fibrous Concrete (SIFCON), Low Cost Housing Materials and Techniques, Artificial Neural Networks. She has published several research articles both in national and international journals. She has a total experience of around 22 years at JNTU.



Prof. H. Sudarsana Rao & Vaishali G Ghorpade being felicitated by Hon'ble Vice Chancellor Prof. G. Ranga Janardhana. Prof. C. Sashidar Registrar, and other University Officials are also seen.



Sree Venkateshwara College of Engineering  
(Autonomous) Tirupati- 517 507.



### 1. PATENTS PUBLISHED IN THIS MONTH

1. A Patent entitled “High gain and enhanced slew rate CMOS operational amplifier” filed with Appl No;202341005234 A dated 26/01/2023 and published on 03/02/2023, Applicants are Dr K Lokesh Krishna, Dr B sudharani, M Poornima, A Krishna moan K Upendra Raju, L Mahesh from ECE department.

2. Mr. K Upendra Raju from the ECE department has filed and published a patent application with application number 202331002664A on January 13<sup>th</sup>, 2023, and published on January 20<sup>th</sup>, 2023. The patent is titled “Machine Learning and Data Science-Based Big Data Analytics of Patients with Lung Cancer”.

3. Dr.P.Selvaraj published a patent, title of patent: “Techniques of Green Fabrication of Stable Lead Free Bismuth Based Perovskite Solar Cells Using a Non Toxic Solvent”. Application NO: 202341003877 A, Publication Date : 17/02/2023

### 2. RESEARCH PUBLICATIONS (NATIONAL/INTERNATIONAL JOURNALS)

1. Mr. Guru Mahesh, Dr. Rajesh N published a research article on “Response surface methodology-based evaluation of S glass fibre composite reinforced with aluminium oxide pearlite” <https://doi.org/10.1080/2374068X.2023.2180137>, Published online: 19 Feb 2023

2. Mr A Krishna Mohan published a paper in “An experimental study on visual tracking based on deep learning”, International Journal of Intelligent Unmanned Systems, Vol. 11 No. 1, pp. 109-117. <https://doi.org/10.1108/IJIUS-08-2021-0089> on 31/01/2023. (Scopus & ESCI Journal)

3. Dr K Lokesh Krishna, Professor ECE Department Published A paper entitled “ Braintumor region extraction using Novel self-organizing map based KFCM algorithm” in Pertanika Journal of Science & Technology ,Vol 37, issue 1, pp577-594, January 2023.

4. M.Chittaranjan, Professor, Dept. of Civil Engineering, published A Paper entitled “Production of probiotics from Environment” Journal of Pharmaceutical Negative Results ,Volume 14 ,Issue 3 ,2023.

### 3. Organized Events

DOI: 10.47750/pnr.2023.14.03.131

1. M- Pulse, an External Management meet has been organized by Department of MBA and MCA on 15-02-23. Students from various colleges of different states participated in this event.

2. Eenadu Talent test organised for students by department of Management studies, SVCE on 31<sup>st</sup> January 2023.

3. “Cyber Crime” which was organised by the Department of Electronics and communication Engineering, SVCE for Students.

4. Organized a Seminar on “Science Behind Electromagnetics” by Dr. K Sudheer, Innovation ambassador, Institute Innovation Cell (IIC) Convener for all B.Tech students on 28<sup>th</sup> February 2023.

5. Organised a webinar on “Process of Innovation Development, Technology Readiness level (TRL): Commercialisation of Lab Technologies & Tech-Transfer” for all B.Tech students on 22<sup>nd</sup> February 2023.

6. Organized a Seminar on “G20@2023 the road map to indian presidency” by Dr.P.Subramanyachary ,HOD of MBA for all MCA students on 25<sup>th</sup> February 2023.

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KSRM College of Engineering  
KADAPA - 516 005.



## National Science Day

- The Department of H&S, KSRMCE (Autonomous), Kadapa, organized an **National Science Day** on **28<sup>th</sup> February, 2023** at 11:00 pm in MB 301-Seminar Hall.
- The Department of H&S, KSRMCE (Autonomous), Kadapa, organized an **National Science Day** on **28<sup>th</sup> February, 2023** at 11:00 pm in MB 301-Seminar Hall.



- KSRMCE-IIC and R&D Cell jointly conducted IIC Quarter – II activity Online Seminar on “[Entrepreneurship skill, Attitude, and Behavior Development](#)”, [07-02-2023](#). Mr. B. Pavan Kumar Gupta, Inventor & Technical advisor, Avan Tech Innovation Pvt. Ltd., Vishakapatnam, A. P., is the resource person for the seminar.

**Technical Quiz competition by  
Department of civil engineering on  
10<sup>th</sup> february 2023  
PROLIFIC 2K23 - A Project Expo**

- The KSRMCE IUCEE Student Chapter and the Department of ECE organized “[Prolific 2K23](#)” - a Project Expo. On [9<sup>th</sup> Feb, 2023](#). The Co-coordinator of the Event is Sri R.V. Sreehari, Associate Professor, Department of ECE, KSRMCE.
- A Guest lecture on “[WORLD RADIO DAY](#)” on [13<sup>th</sup> Feb, 2023](#)
- On the occasion of world radio day, the IEEE KSRMCE conducted elocution competition for the students of III B.Tech; II B.Tech of ECE department. Around 20 students participated in the event.
- [National Women’s Day](#) on [13<sup>th</sup> Feb, 2023](#)
- [Indian National Women’s Day](#) 2023 Each year on [February 13](#), India commemorates [Sarojini Naidu’s birth as National Women’s Day](#), which is observed across the country.
- A [One week](#) workshop on “[PCB DESIGN](#)” [6<sup>th</sup> February to 10th February](#)
- Atal Incubation Unit – Sri KrishnaDevaraya University (AIC-SKU) Annual Startup Awards - 2023
- Atal Incubation Unit – Sri Krishnadevaraya University (AIC-SKU) conducted Annual Startup Jathara Awards – 2023 on 21-01-2023 and 22-01-2023 at the Bhuvana Vijayam Auditorium, S. K. University, Ananthapur
- A program on “[TEHKNICAL PICK AND TALK](#)” held on [25<sup>th</sup> Feb, 2023](#)
- On behalf of IETE – ISF in association with ECHO-2023 and The department of ECE has conducted a program on “[TECHNICAL PICK AND TALK](#)” in KSRM College of Engineering, Kadapa ,

at SJ Block from 2 PM to 3 PM. On this occasion, The Department has conducted TECHNICAL PICK AND TALK competition for II & III year B.Tech students.

- A Program on [IETE – DAY CELEBRATIONS](#) on [25<sup>th</sup> Feb, 2023](#)
- On behalf of IETE – ISF and The department of ECE has conducted a program on “[IETE DAY CELEBRATIONS](#)” in KSRM College of Engineering, Kadapa, at SJ Block from 3 PM to 4 PM. On this occasion, the Department has conducted TECHNICAL PICK AND TALK competition for II & III year B.Tech students.
- A National Seminar on Advancements in Construction Materials and Practices on [11-02-2023](#)
- The Indian Concrete Institute (ICI) Students’ Chapter, KSRMCE (A), in association with Civil Engineering Association, is going to organize a National Seminar on “[Advancements in Construction Materials and Practices](#)” on [11-02-2023](#) at KOR Auditorium.

**Digital Learning Day**

- Total [30 students](#) participated in this programme Smt. N. Lavanya, Asst. Professor, CSE and Smt. O.V. Sowmya, Assistant Professor, Dept. of CSE acted as the coordinators for this event.
- The Conference is Conducted by CSE Department. [Convenor is Dr. V. Lokeswar Reddy Professor and HOD of CSE Department](#), [Co-coordinators are A. Chandraobul Reddy, S.Riyaz Banu and N.Venkata Siva Reddy, Asst.Professors](#) .
- Dr. N. Ramanjaneya Reddy, Associate prof in CSE, participated one week FDP on “[Natural Language Processing](#)” organized by VNRVJIT, Telangana in association with IEEE Computer Society from [13<sup>th</sup> - 17<sup>th</sup> February, 2023](#).
- Mr.A.Ram Prakash Reddy Published a journal on “[Medication Alarm : A Proficient IOT -Enabled Medication Alarm for Age old people to the Betterment of their Medication Practise](#)” in JPNR .
- Papers Presented in Conferences and Reviewer Information.

## Journal Publications of EEE staff

Dr. M. S. Priyadarshini

Significance of Harmonic Filters by Computation of Short-Time Fourier Transform-Based Time-Frequency Representation of Supply Voltage

Energies

1996-1073 SCIE

Dr. M. S. Priyadarshini

Master-Slave Node IoT Technique for Street Lighting International Conference on Recent Trends in Engineering and Technology

by K.S.R.M College of Engineering, Kadapa International 29.12.2022

Mr. T. Kishore Kumar

A Grid-Connected Power System For Photovoltaics With An Improved Transformerless Inverter With Common-Mode Leakage Current Elimination 4<sup>th</sup> International Conference on Power and Embedded Drive Control ICPEDC 2023 by Sri Sivasubramaniya Nadar College of Engineering, Chennai

International 24.01.23 and 25.01.23

man APSICHE, Aluru Sambasiva Reddy, Prof. C. Sashidhar, Registrar of JNTUA & Dr.R. Padma Svarna, Director for Sponsored Research, JNTUA have graced the occasion.



Anti-Ragging and Anti-Drug usage Awareness program was conducted in SVCN by the Police Department on 24th February. Sree Venkateswara College Of Engineering Anti-Ragging Cell in coordination with Police Department SPSR Nellore District jointly Organized an Anti-Ragging & Anti-Drug awareness program to Students, Faculty and Staff Conducted in SVCN Digi hall. Police Dept officials Kodavuluru SI Subba Rao, Buchireddypalem CI Rama Rao and DSP Veeranjanya Reddy addressed students and gave a speech on Anti-Ragging and Anti-Drug Awareness.



Eenadu quiz contest conducted at SVCN campus on 27th February. As part of inculcating the general knowledge Quotient through reading news papers, Telugu leading daily news paper publication office came up with QUIZ Contest in SVCN Campus on February 27th where 300 students actively participated. Top Three Winners are awarded Certificates and Prizes from Eenaadu, Nellore through SVCN Hon'ble Chairman Dr Penuballi Babu Naidu and SVCN Principal.

National Science day 2023 Organized at SVCN Campus on 28th February 2023.

Ms. M. Chitra Rupa, Assistant Professor Dept. of CSE has attended for a webinar on "Introduction



Sree Venkateswara College Of Engineering Nellore- 524 316.



A Five day Training Program on Intel Unnati Artificial Intelligence Lab Course Content organized at SVCN Intel Unnati AI lab in association with ED-GATE Technologies, Bangalore from 20-24 February 2023.

Artificial Intelligence Data Centric lab Inaugurated at SVCN Campus on 23rd February 2023 by Sri Ramesh Palagiri, CEO, Wirtgen Group. For this program Prof. K. Hemachandra Reddy Chair-

to Tensor flow and intel optimization for Tensor flow ” organized by Intel Unnati Ignite on 15.02.2023.

Mrs. V. KusumaPriya , Associate Professor Dept. of CSE has attended for a webinar on “Introduction to Tensor flow and intel optimization for Tensor flow ” organized by Intel Unnati Ignite on 15.02.2023.

The T&P cell organized 4 days Company Specific training for 27 Shortlisted students from 14 to 17 February for the LUMEN Technology company Hackathon round. Principal Dr. P. Kumar Babu motivated the students.

On 23rd February 2023 SVCN CDCE in association with SVCN NSS Unit has Organized Tree –Plantation at SVCN College Campus. On this occasion Chief Guest of the Event Mr. Ramesh Palluru, CEO Wrights group , Dr P. Babu Naidu, Chairman of SVCN, Director Administration , Director Finance, Principal SVCN, CDCE Coordinator & NSS Pro-

gram Officer, HODs of various Department along with NSS & CDCE Volunteers around 60 members have participated in the event and planted trees.

Dr.Venkata Harshavardhan Reddy Dornadula, Advisor R&D, Startups and IIC, Sree Venkateswara College of Engineering, has under filed a German Design /Patent (Position1) on Device to Provide Protection for Women by Using Smart Security Device, received confirmation during February 2023.

Under the guidance of Dr. S. Arun External Advisor R&D, Chennai, Sree Venkateswara College of Engineering, Nellore applied for PMKVY 4.0 Skilling program coordinated by AICTE and NSDC for upgrading Skill of B Tech students. Mr. V.Varun Kumar Asst. Professor Dept of Mechanical Engineering and Mr K Girish Kumar, Asst. Professor Dept of EEE will are the Program coordinators.

## Contribution of Articles to the e - magazine

### Tech Ananth

The members of the JNTUA fraternity all students, faculty and alumni are requested to contribute for publication in the monthly illustrated on-line e magazine ‘Tech Ananth’ of the University. The members can send submissions to the editorial team email id <emagazine@jntua.ac.in>. The members can send reports of important events along with photos, details of achievements such as awards, prestigious assignments and funded projects, success/inspirational stories of alumni, articles on science and technology which induce technical and scientific thinking. Also students members seeking career counselling in their respective fields can write to the same email id by including <career counselling request> in the subject-line of the email id. Senior Professors of the University shall answer to the counselling related questions which will be published. Members contributing articles shall give their full details such as Name, Designation, College, and Department with mobile number and email id for correspondence.

Editorial Team  
magazine@jntua.ac.in

## News from Constituent Units



JNTUA CE Ananthapuramu

- 1) Alumni Meet (1958-63 Batch), which was held at JNTUA College of Engineering, Ananthapuramu on **09.02.2023**. Hon'ble Vice-Chancellor attended as a Chief Guest and addressed the meet. The University officials, Principal, faculty and Alumni members attended the program.
- 2) Department of EEE, JNTUA College of Engineering, Ananthapuramu conducted a **One day Workshop** on **"Improving Resiliency in Renewable Energy Sources connected Micro-Grids"** in collaboration with Institute of Engineers on **10.02.2023**. Dr. B. Ravi Kumar, Associate Professor, Electrical Engineering, IIT Hyderabad delivered his lecture.
- 3) Department of Chemical Engineering, JNTUA College of Engineering Anantapur organised an International Conference **"Pranathi-2K23"** on **16.02.2023 & 17.02.2023** in association with Department of Pharmaceutical Engineering, BVRIT Narsapur.
- 4) Department of CSE, JNTUA College of Engineering, Ananthapuramu conducted a National Level Workshop on India's Indigenous **"VEGA Processors and Ecosystem"** on **25.02.2023 & 26.02.2023** in association with CDAC and 1979-83 Alumni batch. Experts from CDAC delivered the lectures.
- 5) Hon'ble Vice-Chancellor attended and addressed as a Chief Guest at inaugural function of a Five day Up-skilling program on **"IoT Technologies"** for SC and ST students on **28-02-2023**, organized by the Department of ECE, JNTUA College of Engi-

neering, Ananthapuramu in collaboration with IEEE & C-DAC. The workshop is sponsored by Ministry of Electronics and Information Technology (MeiTY). Mr. P. Pramod Manager IEEE, Principal, Vice Principal, Heads of the departments, University officials, teaching staff and students attended the program.

6) Department of EEE, JNTUA College of Engineering, Ananthapuramu organised a Webinar on **"Operational and Capability Aspects of Turbine Generators & Performance Improvement"** on **28.02.2023**. Sri. K M Vishnu Murthy, Former DGM, BHEL acted as resource person for the program.

7) Hon'ble Vice-Chancellor attended as a Chief Guest to Inaugural Function of **Five-day FDP on "Enterprise AI"** on **28.02.2023** organized by the Department of CSE, JNTUA College of Engineering, Ananthapuramu in association with ISTE, AP Section. Sri Ganesan Narayana Swamy, IBM Global Leader for AI and Cloud Enablement and Ecosystem, Principal, Vice-Principal, Director of Faculty development, Heads of the departments, University officials, teaching staff and students attended the program.



JNTUA OTPRI Ananthapuramu

1. Hon'ble Vice-Chancellor attended and addressed as a Chief Guest to **Fresher's Day** function of Food Technology department and Pharmacy department of OTPRI, JNTUA on **10.02.2023** and **16.02.2023** respectively. The Registrar, Director & Principal of OTPRI, teaching staff and students attended the program.

2. Hon'ble Vice-Chancellor attended as a Chief Guest to **Sports Meet** inaugural function held at OTPRI, JNTUA. The Director, Principal, teaching staff and students attended the program. Hon'ble Vice-Chancellor also attended as a Chief guest to **College Day** Celebrations of OTPRI, JNTUA on **22.02.2023**, which was held at OTPRI, JNTUA. Sri M. Sreekanth Reddy, International Basketball Player; Director, Principal, teaching, non-teaching staff and students attended the program.

3. JNTUA OTPRI organized **Fresher's Day** and Farewell Day Celebrations for the 2022 admitted batch and 2021 outgoing batch on **04.02.2023** & **25.02.2023**. All UG & PG students, faculty and non-teaching staff participated in the program.



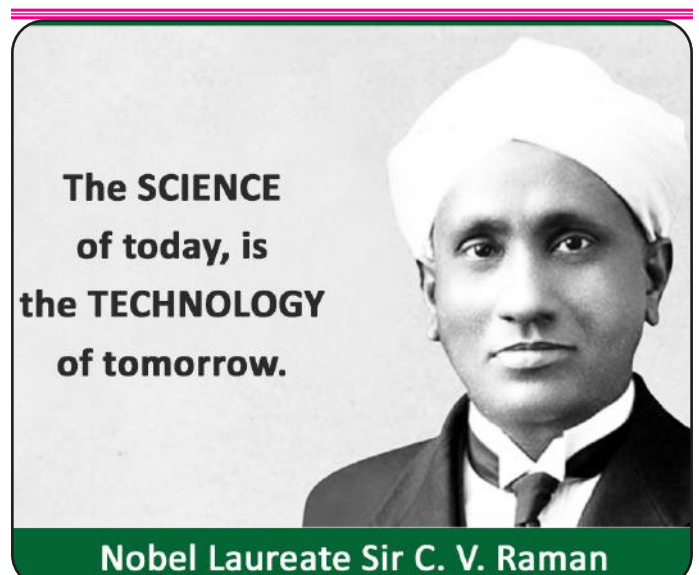
JNTUA CE Kalikiri

1. JNTUA College of Engineering, Kalikiri conducted program on **"Industry Expectations and Quality Processes"** on **08.02.2023** to make the students ready for Industry 4.0.
2. JNTUA College of Engineering, Kalikiri conducted **"International Test Preparation Programme"** by M/s Arwin Solutions from **14.02.2023 to 23.03.2023** to up skill students.
3. **Health awareness program** is conducted by JNTUA College of Engineering, Kalikiri (H&S) in collaboration with CRPF Kalikiri during **22-24 February 2023**
4. JNTUA College of Engineering, Kalikiri conducted a **"Three day Workshop on MATLAB & Simulink"** for III B. Tech II Semester students during **24-25 February 2023** and for IV B. Tech II Semester Students on **26.02.2023** to develop programming skills and prepare them for their Academic Projects.
5. JNTUA College of Engineering, Kalikiri conducted **Sports Day** on **28.2.2023** to identify the talents in students.



JNTUA CE Pulivendula

1. JNTUA College of Engineering, Pulivendula conducted one day National Seminar **"Women Centric Legal Issues, Cybercrimes and SAKHI - One stop centre"** on **22.02.2023** in association with Police department of Pulivendula and DISHA team of Kadapa District, One Stop Centre, Kadapa and Women Empowerment Cell.
2. On February **26.02.2023**, all the students from Mechanical engineering Department visited an industry **NANDI PVC EXTRUSION** at Proddatur for knowing about how the PVC extrusion will happen.



## News from University



1. A 46<sup>th</sup> Meeting of Building Committee was held on **07.02.2023**. The Rector, Registrar and DICS i/c, EE (R&B), EE (APSPDCL), Principals of the Constituent colleges, University Engineer attended the meeting.

2. Prof. H. Sudarsana Rao and Prof. G.Vaishali Ghorpade, Department of Civil Engineering, JNTUA College of Engineering, Ananthapuramu have been felicitated by the University on **08.02.2023** for their contribution in the Grant of the Patent “**Method for Preparation of Bacterial Concentrated with Self Healing Abilities and Product Thereof**”.

3. A Meeting was held under the chairmanship of Hon’ble Vice-Chancellor on **09.02.2023** in connection with NIRF India Rankings 2023. Prof. K. Balaveera Reddy, Former VC, VTU, Karnataka; University officials and Heads of the departments attended the meeting.

4. Directorate of Sponsored Research, JNTUA Anantapur has organised an interactive session with Research advisor of JNTUA, Ananthapuramu, Dr. D.R. Prasada Raju, Scientist-G (Rtd.) DST on **February 14<sup>th</sup>, 2023**. Many faculties interacted with him regarding the submission of research proposals for DST- Core Research Grant. Also discussed regarding the Summer Internships being offered by IIT-Hyderabad and IIT-Tirupati.

5. The 31<sup>st</sup> meeting of Standing Committee for Academic Senate of the University was held under the Chairmanship of Hon’ble Vice Chancellor on **15.02.2023**.

6. AP EAPCET’23 meeting with the Convener, Co-convener and Coordinators was held under the Chairmanship of Hon’ble Vice-Chancellor on **15.02.2023**.

7. Hon’ble Vice-Chancellor attended as a Chief Guest to 86<sup>th</sup> Birth Anniversary of Dr. Bhuthapuri Subramanya Sharma and 21<sup>st</sup> Smaraka Sahithya Awards presentation, which was held at Brown Shastri Meeting Hall, Yerramukka Palle, Kadapa Dist on **19.02.2023**. Prof. Anumaandla Bhumaiah, Former Vice-Chancellor, Potti Sreeramulu Telugu University, Hyderabad; Prof. Maadabhushi Sampath Kumar, Prof. Y.P. Venkata Subbaiah, Registrar, YV University, Kadapa attended the program.

8. An online meeting was hosted by Principal Secretary, Higher Education department, Govt. of Andhra Pradesh on **20.02.2023** with Vice Chancellors, Registrars and Administrative officials of all the Universities.

9. A meeting was held under the Chairmanship of Hon’ble Vice-Chancellor on **20.02.2023** with the Principals of the Constituent colleges in connection with conduction of activities in the respective colleges. The Rector, Registrar and Directors also attended the meeting.

10. QAC – Advisory Committee meeting on **21.02.2023** through online mode which was hosted by AP State Council of Higher Education.

11. Review meeting on NAAC IIQA data submission was held under the Chairmanship of Hon’ble Vice-Chancellor on **21.02.2023 & 25.02.2023**. The Rector, Registrar, University Officials, Principals, Heads of the departments and teaching staff attended the meeting.

12. Hon’ble Vice-Chancellor attended as a Chief Guest to Annual Day Celebrations of G. Pulla Reddy Engineering College (Autonomous), Kurnool on **22.02.2023**.

13. Hon’ble Vice-Chancellor attended as a Chief Guest to **NOVATO FIESTA’2K23** program on **25.02.2023**, organized by the School of Management Studies, JNTUA. The Officer in charge of MBA; Secretary, Sports Council; teaching staff and students attended the program.

14. Under the Society Outreach Initiative, on the **eve of National Science Day**, Directorate for Sponsored Research, JNTUA conducted an awareness program for the students of Netaji Subhas Chandra Bose Municipal Corporation High School, Anantapur on **28-02-2023**. On this occasion, importance of Science Day and Raman Effect was explained. Demonstrated experiments related to induction of charges and pressure. Distributed prizes for the winners of essay writing and elocution competitions conducted on the theme of the **Nation Science Day**.

# University Examination Results



**R**esults of the semester end examinations conducted by the university are declared in the month of February 2023. Details are as below:

**01-02-2023**

Challenge Valuation results of B.Tech III Yr II sem (R15) Supple March 2022

**04-02-2023**

B.Pharm IV Yr I sem (R19 & R15) Reg & Supple Jan 2023 Exams

**10.02.2023**

B.Tech IV Yr I sem Reg & Supple Jan 2023 Exams and M.Pharmacy IV sem Reg & Supple Nov 2022

**13.02.2023**

Challenge Valuation results of MBA III sem (R17) Supple Sep/Oct 2022 and MBA I sem (R17) Supple

Oct/Nov 2022

**17.02.2023**

Challenge Valuation results of B.Tech III Yr II sem (R19) Regular July/Aug 2022, B.Tech II Yr II sem (R20) Regular Aug/Sep 2022 and Pharm.D I Yr(R17) Reg & Supple Nov/Dec 2022

**27.02.2023**

B.Pharm III Yr I sem (R19 & R15) Reg & Supple Jan 2023 Exams and Pre Ph.D Winter Session December 2022 Exams

**28.02.2023**

Recounting results of B.Pharm IV Yr I sem (R15) Supple January 2023, B.Pharm IV Yr I sem (R19) Regular Jan 2023 Exams.

## Journal/Conference Publications:

The faculty members of the University published 27 research papers and affiliated colleges have published 71 research papers in peer reviewed journals, seminars & conferences during this month.





## “ Books / Book Chapters Published ”

1. D. Zarena faculty of JNTUA College of Engineering, Ananthapuramu published a book Engineering Physics Lab Manual for 1<sup>st</sup> year B.Tech students by Nitya Publishers, 2023.
2. Dr. N Madhusudhana Reddy faculty of Rajeev Gandhi College of Engineering & Technology, Nandyal published a book titled “Data Structures and Algorithms”, in RK Publications, ISBN: 9789395331975.
3. C. Ayyanna faculty of Creative Educational Society’s College of Pharmacy published a book titled “Ethanol – Chemistry- Production, Modeling, Applications and Technological Aspects” on 14.02.2023 published by Intec open.

1. Department of Civil Engineering, JNTUA College of Engineering Ananthapuramu generated an amount of Rs. 4,25,568/- through Industrial Consultancy Services.
2. University provides a Research seed grant of Rupees one lakh each to its young faculty members to initiate research activities and to set up their own laboratory. Seed grant is given to 5 assistant professors from the departments of Electrical and Electronics Engineering and Electronics and Communication Engineering during the month of February, 2023.



## Awards and Recognitions

1. JNTUA College of Engineering, Ananthapuramu conducted Microsoft certification course examination during 19.02.2023 to 24.02.2023 which is the initiative of Govt. of Andhra Pradesh and is implemented through AP State Council of Higher Education. 180 students have taken the test in various courses and out of them 160 are certified.
2. The following students of M.Tech in Environmental Engineering at JNTUA College of Engineering, Ananthapuramu received awards / appreciations:
  - i) Mr. D. Anush received Best Paper award at

- an International Conference Pranathi-2K23 organized by Department of Pharmaceutical Engineering, BVRIT, Narsapur during 16 – 17 February 2023.
- ii) Mohammad Azam received Best Paper award at a National Conference CHEMSPARK-2K23 organised by Chaitanya Bharathi Institute of Technology (A), Hyderabad on 20.02.2023.
  - iii) Ms. T. Prathyusha received Best Paper award at a National Conference CHEMSPARK-2K23 organised by Chaitanya Bharathi Institute of Technology (A), Hyderabad on 20.02.2023.

### Ph.Ds Awarded:

The University has awarded Ph.D. to 14 research scholars during this month. Details are as below

Discipline	Number of Ph.D's Awarded
Civil Engineering	01
Electrical and Electronics Engineering	01
Electronics and Communication Engineering	01
Mechanical Engineering	01
Chemistry	02
Mathematics	05
MBA	02
Pharmacy	01





## “ Patents Awarded ”

1. Prof. H. Sudarsana Rao faculty of Civil Engineering, JNTUA College of Engineering, Ananthapuramu published a patent ‘Method for preparation of bacterial concrete with self-healing abilities and products thereof’ Indian patent No. 417107.
2. Dr. D. Lenine faculty of Rajeev Gandhi College of Engineering & Technology, Nandyal published a patent “Green House Gas reduction process technology for future electrical vehicles” (Indian Patent Application Number: 202341009556, Publication Date: 24.02.2023).
3. P. Sai Sampath Kumar faculty of Rajeev Gandhi College of Engineering & Technology, Nandyal published a patent “Wireless power transmission of smart Electric Vehicle system” (Indian Patent Application Number: 202341007268, Publication Date: 10.02.2023).
4. P. Sesi Kiran faculty of Rajeev Gandhi College of Engineering & Technology, Nandyal published a patent “Novel system and method for generating hydrogen by electrolysis of water from a green power source” (Indian Patent Application Number: 202341009151, Publication Date: 17.02.2023).
5. C. Ayyanna faculty of Creative Educational Society’s College of Pharmacy published a patent i.e., Evaluation of Antineoplastic Activity of Ficus Racemosa Leaf Extract” on 24-02-2023, Application no. 202341005609, by Indian Patent Publication.
6. Dr. P. N. Balaji faculty of Seven Hills College of Pharmacy published a patent “RP-HPLC method for simultaneous estimation of Telmisartan and Nifedipine in pharmaceutical dosage form” Application No.202341009094A, on 17.02.2023, Patent Office Journal No. 07/2023.

## Research Projects

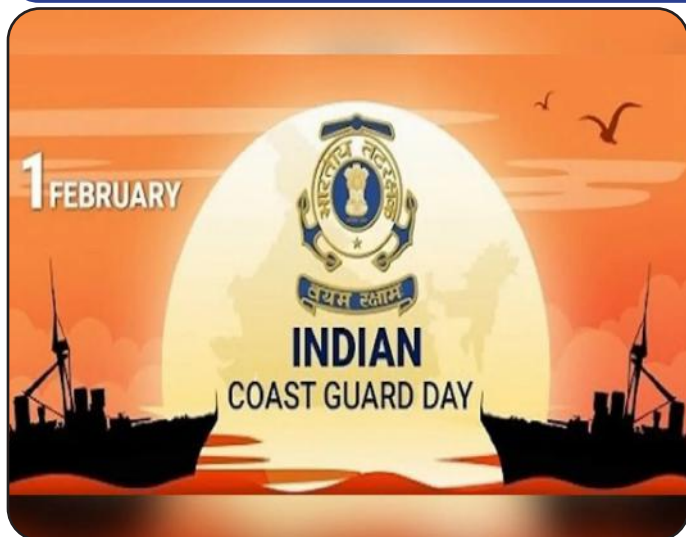
1. Dr. B. Omprakash, Assistant Professor of Mechanical Engineering JNTUA CEA has received a research grant of Rs.35,00,000/- for a project entitled “CFD analysis and Experimental validation of Heat Flow around spherical spheres filled with phase change energy storage materials” from DST scheme Empowerment and Equity Opportunities for Excellence in Science and Engineering Research Board .
2. The following faculty of JNTUA Engineering College, Pulivendula have been sanctioned with In-house projects by JNTUA:
  - Dr. S. Jessica Saritha is sanctioned a project on Securing Internet of Things against Sinkhole Attack Using RPL Protocol).
  - Dr. S. Radhakrishna is sanctioned a project on Energy Efficient RPL Protocol Implementation for Mobile Internet of Things.
  - Dr. G. Murali is sanctioned a project on Detection and Prevention of DDoS Attacks on the IoT.

## NCC/NSS/Service Programmes

Webinars, awareness sessions, seminars, competitions were conducted by NSS units of the constituent colleges/units on the following important days in the month of February 2023:

1. World Cancer Day on 04.02.2023
2. Plantation Day on 07.02.2023
3. Conducted free eye checkup camp on 11.02.2023
4. Collection of waste from college surroundings on 15.02.2023
5. Water Conversation day on 22.02.2023
6. Kalp Taruh program on 24.02.2023
7. Drug Free Andhra Pradesh on 27.02.2023
8. National Science day on 28.02.2023

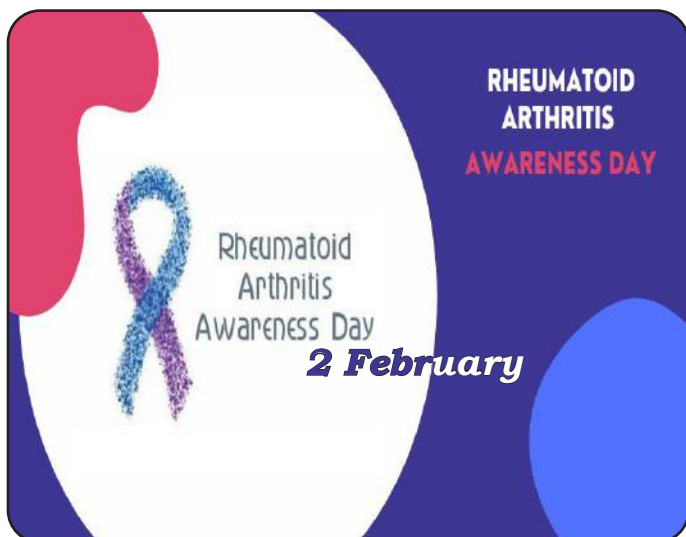
## Important National & International Days in February



On **1<sup>st</sup> February**, the **Indian Coast Guard** celebrates its foundation day. Indian Coast Guard has played a significant role in securing the Indian Coasts and enforcing regulations within the Maritime Zones of India



Every year on **2<sup>nd</sup> February**, **World Wetlands Day** is celebrated internationally. This day marks the date of the adoption of the Convention on Wetlands on 2 February 1971, in Ramsar, Iran.



**Rheumatoid Arthritis Awareness Day** is observed on **2 February** to spread awareness for patients suffering from rheumatoid arthritis.



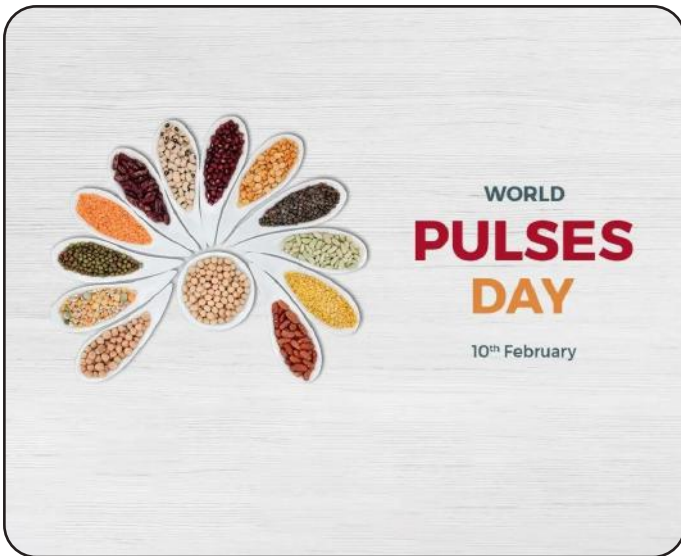
On **4 February** **World Cancer Day** is observed globally and is celebrated by WHO to aware people of the disease Cancer and how to cure it.



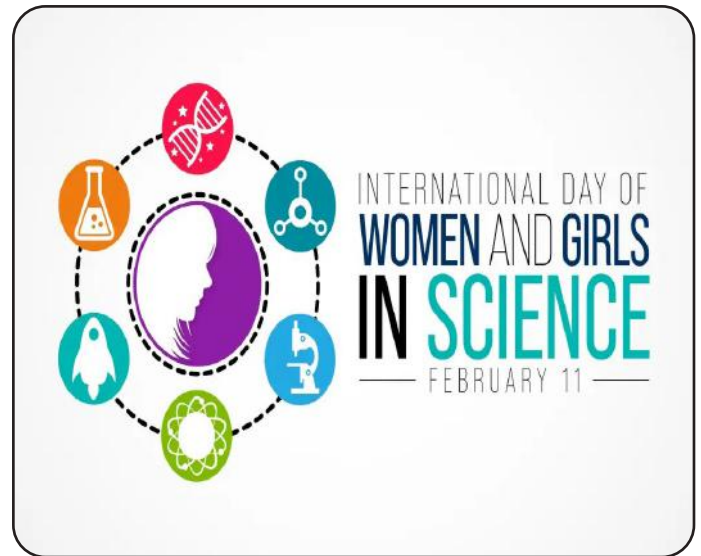
**Safer Internet Day** is celebrated on **8 February**. The day calls for all stakeholders to join together to make the internet a safer and better place for all, mainly for children and young people.



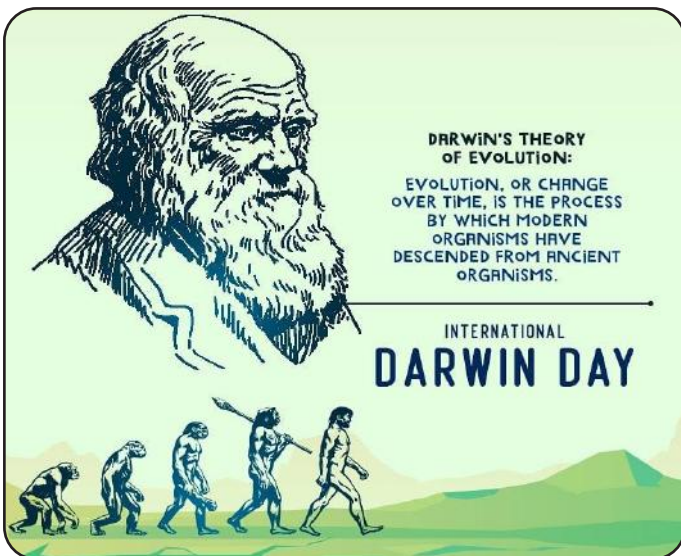
**National Deworming Day** is observed on **10 February**. It is an initiative of the Ministry of Health and Family Welfare, Government of India to make every child worm-free in the country.



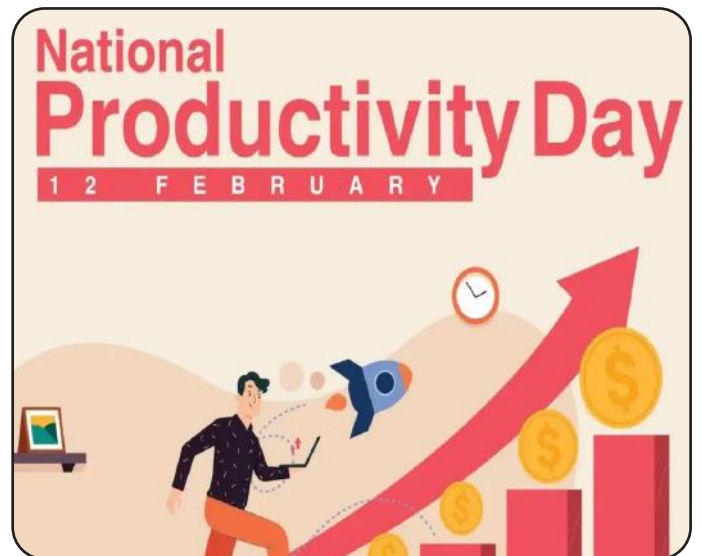
World Pulses Day is observed on 10 February to spread awareness about the nutritional and environmental benefits of pulses as part of sustainable food production.



It is observed on 11 February to recognize the role of women and girls in science, not only as beneficiaries but also as agents of change. The day focuses on achieving full and equal access to and participation in science for women and girls. Also, to achieve gender equality and empowerment of women and girls.



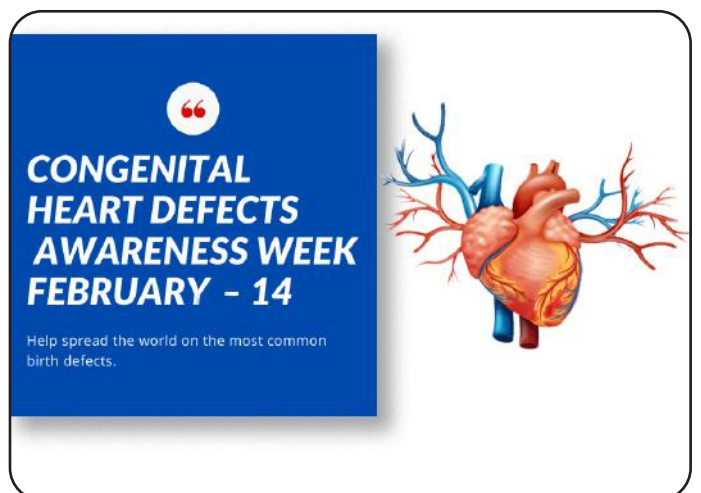
12 February is celebrated every year as Darwin Day to commemorate the birth anniversary of the father of evolutionary biology, Charles Darwin. This day highlights Darwin's contribution to evolutionary and plant science.



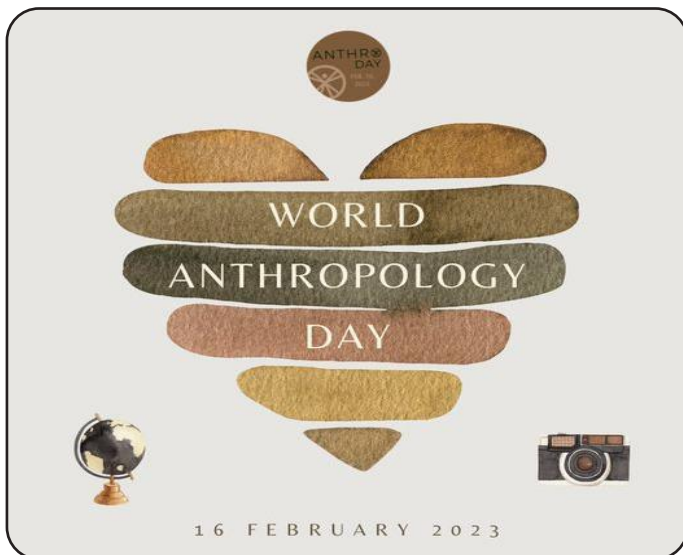
It is observed on 12 February annually to increase the productivity culture in India. It is celebrated by the National Productivity Council (NPC) with a theme.



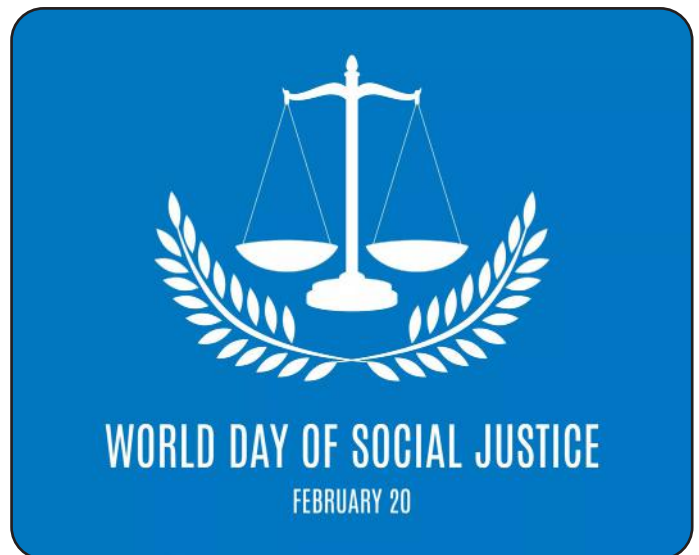
World Radio Day is celebrated on 13 February to raise awareness about the importance of Radio. In several countries, it is the primary source for providing information.



Every year on February 14, there is a celebration called World Congenital Heart Defect Awareness Day with the goal of bringing attention to and educating people about congenital heart defects.



Every year on the third Thursday of February, **World Anthropology Day** is observed. And it occurs on **February 16** this year. The day is designated to honour the untapped area and educate the general public about anthropology.



**World Day of Social Justice** is observed every year on **20 February** to encourage people to see how social justice affects poverty eradication. The main aim of this day is to achieve full employment and support for social integration. This day tackle issues like poverty, exclusion, and unemployment.



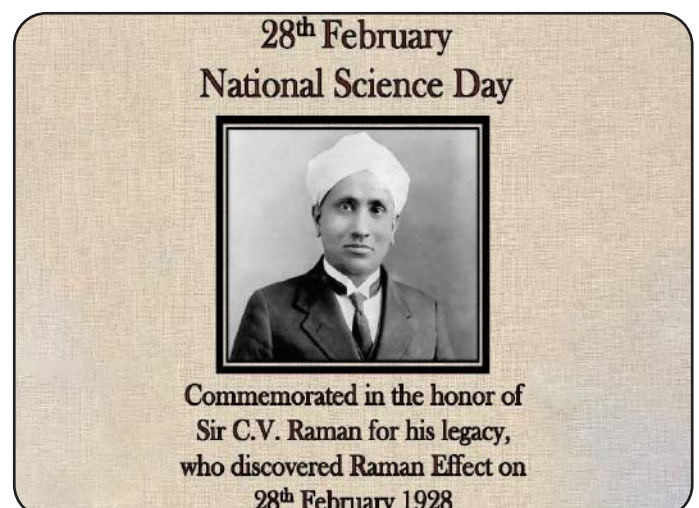
**International Mother Language Day** is celebrated annually on **21 February** worldwide to aware of the diversity of the language and its variety. This day promotes the awareness of language and cultural diversity across the world.



Every year on **February 23**, **World Understanding and Peace Day** is celebrated. Actually, this day serves to remember Rotary International's inaugural convention.



**World NGO Day** is celebrated on **27<sup>th</sup> February** each year and is dedicated to recognizing, celebrating, and honoring all non-governmental and non-profit organizations, and also the people behind them that contribute to society.



**National Science Day** is celebrated on **28 February** to mark the discovery of the Raman Effect by the Indian physicist Sir Chandrasekhara Venkata Raman.



# APSCHE

Andhra Pradesh State Council of Higher Education



*From the  
Chairman's Desk*

## THE MOROCCAN MIRACLE

There is a bird called Phoenix in Egyptian mythology with which an interesting fable is associated. It is said that the Phoenix after a long life burns itself and another Phoenix is born from its ashes. Though it is a myth, rising of Phoenix from the ashes symbolizes the process of attaining great progress from the grave circumstances. Is it not a miracle when a person or a country, makes a giant leap from a miserable condition to the most prosperous state? The same thing happened with Morocco, a North African country with a coast line about 2,500 km length, and the transformation is known as "Morocco Miracle". In recent decades, Morocco has experienced rapid economic growth, driven mainly by strong government policies and reforms coupled with an influx of foreign investment. The GDP increased from USD 38.86 billion in 2020 to USD 132.73 billion in 2021 with an average annual growth rate of 4%. The GDP per capita increased from USD 1335 in 2020 to USD 3497 in 2021. The population grew steadily at 1.3% from 31 million in 2000 to around 37 million in 2022. The poverty rate declined from 31% in 2001/02 to 13% in 2017/18. Life expectancy improved from 71 years in 2000 to 76 years by 2022. Inflation was reported at 1.0%, and unemployment rate is 8.5% in 2020. Morocco made history as the first African/Arab country to ever reach the semi-finals of a FIFA World Cup.

Morocco did remarkably well in implementing laws favoring equal salaries regardless of origin or gender, resulting in a high percentage of employment while simultaneously evaluating opportunities by investing back into local industries via loans that account 50% on water storage or sanitation systems. This has resulted in an enabling environment for improved living standards of people with remarkable achievements like 40% reduction on IMR from 41 per 1000 live births (2000-2009) to 24 per 1000 live births (2020-2022). Despite facing multiple challenges from migration influxes resulting from broader regional instability issues, Morocco has managed stabilized economic growth, socio-economic development with reduced inequality, and environmental protection. There are many promising lessons one can learn from Morocco's path to economic growth and development. Though Andhra Pradesh is doing well, one can learn these three things from Morocco's development:

1. Sustainable Development: Morocco has embraced sustainable development within its economic, social and environmental strategies, using renewable energy sources and green technologies to reduce its dependence on fossil fuels.
2. Reforms in Education: Morocco has implemented significant reforms in education, creating equal access for all citizens by expanding infrastructure and providing free primary education and technical training.
3. Infrastructure Development: Morocco has invested heavily in transportation and telecommunication networks including roads, bridges, ports, railways and airports.

Andhra Pradesh government has already initiated reforms and measures in similar fashion and if we follow the same path, a bright future lies ahead for our State.

I will write a series of articles to understand and embrace the 'Moroccan Miracle'.

**This being the 50<sup>th</sup> article from Chairman's Desk, this marks the golden jubilee week. I thank everyone for their continuous support.**

*Prof. K. Hemachandra Reddy*  
Chairman, APSCHE



Meeting of University Officials with Chairman APSCHE Prof. K. Hema Chandra Reddy on **02.02.2023** regarding Minor and Honors degrees, Internship programs.



46<sup>th</sup> Meeting of Building Committee was held under the Chairmanship of Hon'ble Vice Chancellor on **07.02.2023**. The Rector, Registrar and DICS i/c, EE (R&B), EE (APSPDCL), Principals of the Constituent colleges, University Engineer attended the meeting.



Meeting of University Officials with representatives of EDUCLO, a digital platform for students, teachers and education providers on Date: **14.02.2023**



Felicitation of Ms. S. Vaheeda Advocate Anantapur District Court on Date: **20.02.2023** by Department of School of Management sciences in connection with seminar on "Cyber Crimes and Protective Laws for Women".



Written test by Medha Servo Drive Private Limited, Campus Placement Drive @ JNTUA College of Engineering Ananthapuramu on **21.02.2023**



Vice Chancellor Prof. G. Ranga Janardhana held a meeting on NAAC with Vice Principal, the HoDs and faculty members of Anantapur, Pulivendula and Kalikiri Colleges in the office of IQAC Director on **21.02.2023**.

# Tech Ananth

**JAWAHARLAL NEHRU TECHNOLOGICAL  
UNIVERSITY ANANTAPUR**

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