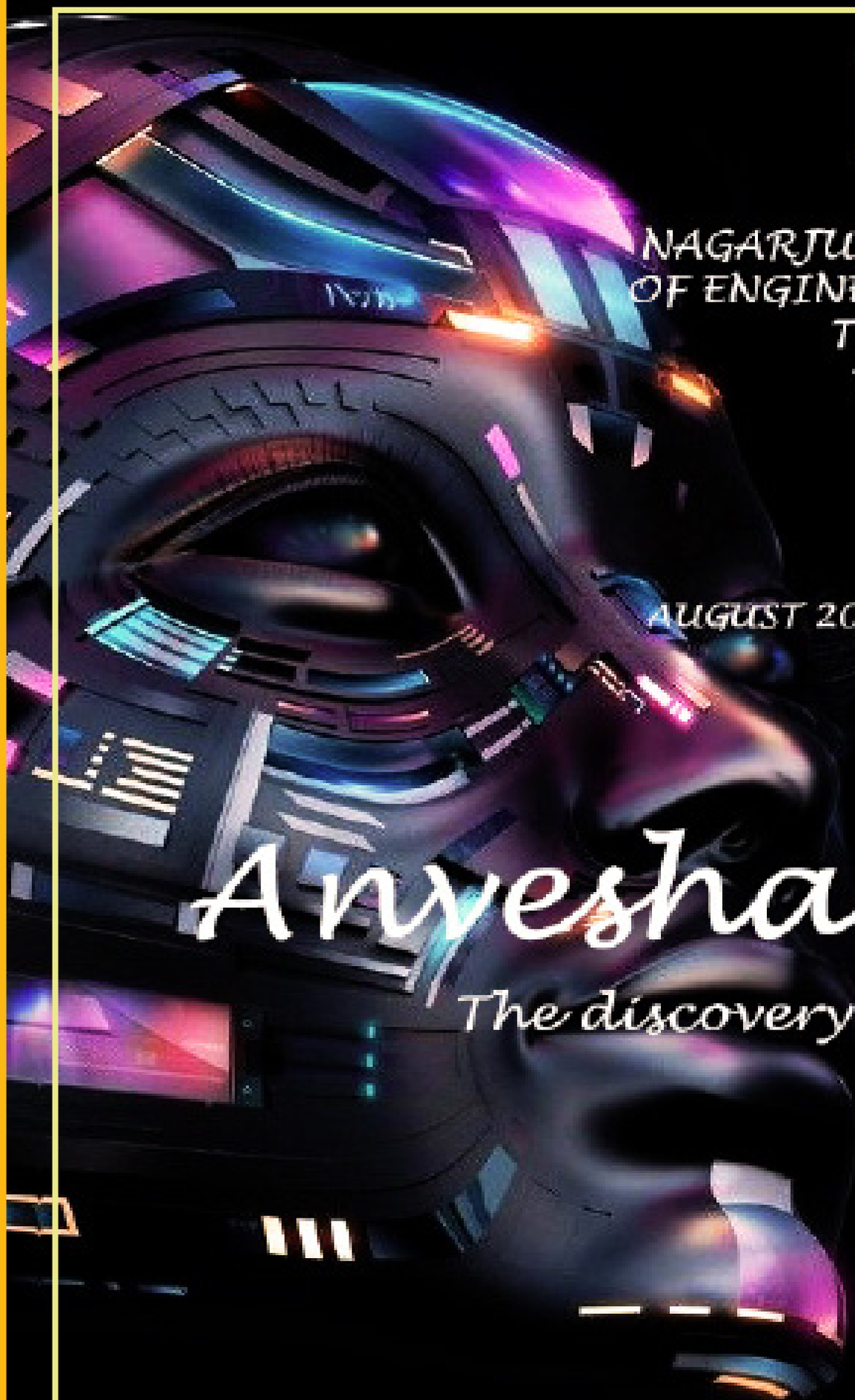


NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY BENGALURU

EDITION 4

AUGUST 2018 - JULY 2019

Anveshane

The discovery begins....

Newsletter of

Mechanical Engineering Department

Editorial Note

It gives me immense pleasure in bringing out the fourth volume of our departmental magazine "ANVESHANE. The essential purpose of ANVESHANE is to inform, engage, inspire and entertain a diverse readership- including students, parents, faculty, alumni and staffs of NCET.

The college plays a vital role in the life of young students learning to blend knowledge, wisdom, rules and integrity at the very outset of their budding engineering years are indeed imperative. The compiled news and articles are not just information about our institution, but shows how steadily and consistently we are motoring towards the vision and mission of NCET. This edition depicts the journey of the department through glimpses of colourful pictures, interactive sessions, activities and placement updates of the college. I thank the Management, Principal, editorial board, students and all the people who directly and indirectly helped in bringing out this volume. We hope this edition will be well-received by all the readers.

Dr.N.Kapilan
Professor & Head,Department of Mechanical Engineering

Editorial Team :

Mrs. Smitha Suman,
Assistant Professor

Mr. BandoliSiddesh,
Assistant Professor

Mrs. Sandya P S,
Assistant Professor

Student Committee :

Mr. Manjunath Patil

Miss.Sneha Diwakar

Mr. Mintu Kumar

Tell me and i forget.

Teach me and i remember.

Involve me and i learn.

Benjamin Franklin.....

PLACEMENT DATA

HEARTY CONGRATULATIONS *to the First outgoing batch of Autonomous Scheme of Mechanical Engineering Department who are placed at various industries through the placement drive conducted by the Placement cell, NCET. A good number of mechanical students cleared the different rounds of selection and were offered job opportunities.*

Sl No	Name of the Company	Number of students Placed
01	HP	01
02	BLUECOLD REFRIGERATION	05
03	RENAULT NISSAN (TEAMLEAS SERVICES)	10
04	CADD CENTRE	05
05	UNITY ELEVATORS PVT. LTD	01
06	SPIRO GEARS INDIA PVT.LTD	06
07	MOTHERSON AUTOMOTIVE TECHNOLOGY & ENINEERING PVT. LTD, CHENNAI	06
08	SRI LAKSHMI AUTOMOBILES PVT LTD	03
9	MITHRA PRECISION COMPONENTS	03
10	TERTIUM TECHNOLOGY	04
11	CORENTECH MECH PVT LTD	01
12	TITAN	01
13	MICRO TEK	01
14	IDS	01
15	IBM	01

RECRUITMENT DRIVE

CADD Center Campus drive

Renault Nissan drive.

AMS India Pvt Ltd, Peenya, Bengaluru.

BlueCold Refrigeration, Bommasandra, Bengaluru.

Kalpa Electrikal Pvt. Ltd. Bangalore

S R Hydraulics system Ltd.

Spiro Gears India Pvt. Ltd.

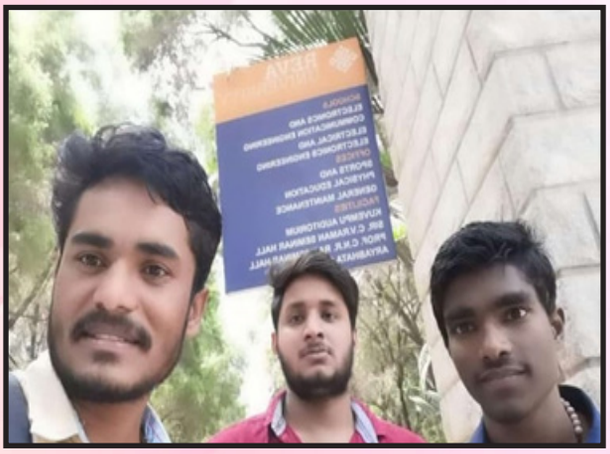
Achievements of our students

Our student Puneeth A as part of UG Fellowship programme from Ural Federal University, Ekaterinburg, Russia worked on project ***Design of Passenger Car (Volkswagen Polo)*** *and published his research paper in* ***International scientific Journal on Mechanical Characterization of Glass/ Jute/ Polyster/ Reinforced Hybrid Composite***

Rajeev Patra & Sharan Kumar *of 4th Semester participated and won First place in Drone Racing held at Gitam University, Bengaluru*

Likhitha C S *participated in the International Conference on Industry 4.0 & Advance Manufacturing held on 28-29th June 2019 at Indian Institute of Science , Bengaluru and won Distinguished Paper Award by Springer.*

Saravana Devaraju *of 8th semester participated and won 2nd Prize in the inter collegiate technical fest, "TECHNO RUSH 2019" organised by Dr.T.Thimmaiah Institute of Technology, KGF on 14th March 2019.*



Final Year Students presented a paper titled ***"Fabrication & Testing of Evaporative Cooling System"*** *in National Conference(NCRTME-2019) at Reva Universty held on 6th May2019.*

MECHANICAL STUDENTS AT IISC, BENGALURU

Project Exhibition

Project Exhibition *was conducted for the final year students, a platform to display their ideas, skills and technical knowledge judged by Mr. Subash Shivanna, Divisional Manager-IRSG, TITAN COMPANY ltd. Prizes were awarded to the deserving project groups to motivate the students.*

VTU Funded Projects

The following Final year students project was selected for sponsorship from VTU

1)Fabrication and Testing of Evaporative Cooling System.

2) Radiant Cooling System.

WINNERS OF B.E FINAL YEAR PROJECT EXHIBITION

Sl No	usn	Name of the students	Project title	Name of the guide	Prize Awarded
01	1NC15ME009 1NC15ME030 1NC15ME051 1NC15ME062	Mr.Akshaya Kantikar Mr. Chandan R Mr. Jayasurya Patil Mr. Madhushree K	Accident detection in smart vehicle using rack and pinion mechanism	Mr.Amaresh Gunge	First (2500/-)
02	1NC15ME102 1NC15ME110 1NC15ME115 1NC15ME084	Mr. Priyanka V Mr. Rajashekara Mr. Rakesh N Mr. Nagesh	Productivity improvement through process analysis by optimizing assembly line and layout	Mr.Bandoli siddeshwara Iresh	Second (2000-)
03	1NC15ME054 1NC15ME025 1NC15ME004 1NC15ME026	Mr. Kalyan Mahesh M Mr. Bharath M V Mr. Abhishek R Mr. Bharath Kumar G	Study on performance characteristics of hybrid cooling system	Dr.Kapilan N	Third (1500/-) Fourth
04	1NC15ME063 1NC15ME072 1NC15ME133 1NC15ME145	Mr. Madhusudhan Rao Mr. M Manoj Prabhakar Mr. Shekar S Mr. Swarrop R	Evaluation of prepared hybrid composite material using FEM and scanning electron microscope	Mr.Ravi Y V	Fourth (1000/-)
05	1NC15ME152 1NC15ME134 1NC15ME105 1NC15ME139	Mr. Varalakshmi C N Mr. Mr. Shivateertha S Mr. Pushpa S Mr. S V Sai Sandeep	Tribological performance evaluation of friction stir processed Al5052 in atmospheric condition	Mrs.Smitha Suman	Fifth (1000/-)

SPORTS ACTIVITIES

Our students are no less in sports. They have participated in various sporting activities held at different colleges.

Inter Collegiate FOOTBALL Tournament 2019-20 organized by RLJIT, Doddaballapur	*Mr.Abhay Thiwari* *Mr.Shashank K R* *Mr.Prabin Thapa*
Inter Collegiate VOLLEY BALL Tournament 2019-20 organized by RLJIT, Doddaballapur	*Mr.Akash* *Mr.Pruthviraj* *Mr.Manjunath Yadav BN* *Mr.Guddu Kumar Yadav* *Mr.Ananth Kumar Karaturi* *Mr.Ankit Kumar Gupta*
KICK BOXING	*Mr.Sacheth*
Inter Collegiate KHO-KHO Tournament 2019-20 organized by Acharay Institute of Technology, Bengaluru	*Mr.Ekanth C* *Mr.Airaj M* *Mr.Deekshith Kumar Y S* *Mr.T R Tejendra Sagar* *Mr.Sachin B K* *Mr.Yashwanth N*
Inter Collegiate CRICKET Tournament 2019-20 organized by SJCIT, Chickaballapur	*Mr.J Jitendra* *Mr.G Raghunath Reddy* *Mr.Mohammad Munnawar* *Mr.M Sai Prasad* *Mr.Sri Ranghanath C N*

INDUSTRIAL VISITS

*Industry Visit to **KOMUL diary plant, Nandi Cross, Chickaballapur** on 29th Jan 2019.*

*6th semester students visited **NITK, Surathkal** on 25th and 26th March 2019 and conducted Engine performance test.*

Staff Achievements

- *Dr. N. Kapilan was invited to a workshop on "Sharpening Skills, Brighten Careers in HVAC&R" on 23rd & 24th January 2019, workshop on "Heat Load Calculation" on 21st & 22nd February 2019 at KNSIT, Bangalore.*

- *Mr. Amaresh Gunge's paper "Study on mechanical properties of alkali treated plain woven banana fabric reinforced biodegradable composites" was accepted for publication in Composites Communications Journal.*

- *Mr. L J Naik presented his paper "Studies on Corrosion behaviour of metals in tyre pyrolysis oil" at International conference on Innovations and Emerging Trends in Mechanical Engineering-IIETME 2019 organized by NCET, Bengaluru, on 25th & 26th March 2019.*

- *Mr. Vinod Kumar presented poster on "A review on effects of various reinforcements on AL2024 based metal matrix composites" MVIT, Bengaluru. He also attended 4 days National Seminar on Innovations in Science & Engineering organised by Sir MVIT & National Academy of Sciences, India (NASI), Bangalore Chapter from 25th to 28th February 2019.*

- *Miss Anupa R attended Workshop on Virtual Labs on 1st October 2018 at NITK, Suratkal. She also has presented a paper "Design and optimization of book shelf using Wood polymer composites" at IIETME-2019 held at NCET, Bengaluru, on 25th & 26th March 2019.*

- *Mrs. Sandya P S presented her paper "Experimental study of e-glass fiber reinforced with polymer composites" at International conference on Innovations and Emerging Trends in Mechanical Engineering-IIETME 2019 on 25th & 26th March 2019 organized by NCET, Bengaluru*

- *Mrs. Smitha Suman attended Seminar on Research Publications, Grants & IPR on March 8th 2019 organised by Technical Institute for Engineers, Bengaluru.*

- *Mr. Vijaykumar M Patil attended a workshop on Sharpening Skills, Brighten Careers in HVAC&Ron 23rd& 24th January 2019. He also attended the Technical talk on Indoor Air Quality byDr. Chandra Shekar, National University of Singapore on 25th February 2019 held at Reva University, Bangalore.*

- *Mr. Lava K R achievements included papers "Experimental Studies on the Effect of Combustion and Emissions of Diesel Engine Fuelled with Simarouba Bio-Diesel" and "A Study on LPG as an Alternative Refrigerant for Refrigeration" at International conference on Innovations and Emerging Trends in Mechanical Engineering-IIETME 2019 at NCET, Bengaluru, his Paper "Comparative Study of Doubled Pipe Heat Exchanger and Shell and Tube Heat Exchanger" being published in IJSRD volume 7 issue 01, March 2019 and participation in One-week Workshop on Refrigeration and Air Conditioningheld at IIT Madras,on 5th October 2018.*

- *Mr. Bandoli Siddeshwar Iresh achievements included paper "Finite element analysis of heavy vehicle subframe chassis" in IIETME-2019 on 25th & 26th March 2019 at NCET, Bengaluru, participation in Two days workshop (Hands on Training) on Non-Destructive Testing held on 8th & 9th August 2018 organized by Dynamik Tek, Chennai and One day training on New product development using CREO at RNS Institute of Technology, Bengaluru*

- *Mr.Prabhakar C G attended technical talk on Static Structural Analysis of gas turbine blade on 22nd & 23rd May 2018 held at SVCE, Bengaluru. He also attended Seminar on Research Publications, Grants & IPR on 8th March 2019 organized by Technical Institute for Engineers, Bengaluru.*

- *Mr. Dileep Kumar published his paper "Nvh analysis of modern car door by using FEA method" at conference held at RRIT, Bengaluru. He also participated in Two days workshop (Hands on Training) on Non-Destructive Testing held on 8th & 9th August 2018 organized by Dynamik Tek, Chennai.*

- *Mr. Manjunath Raju attended a Seminar on "Residual stresses" at IEEE, Bengaluru.*

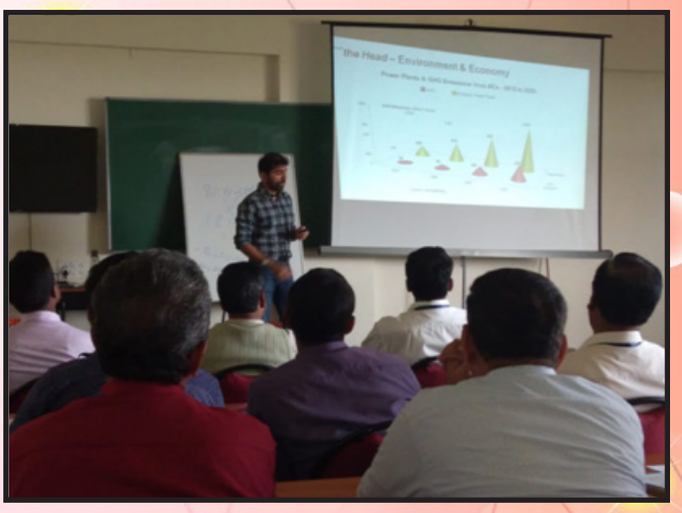
- *Mr. Hareesh Naik's achievements included his paper "Optimization of shell and tube heat exchanger by using twisted tapes and wire wound wire matrix as tube inserts" vol 6, issue 2, May 2018, ISSN: 23210613, 3 days FDP on Turbo machines at VCET Puttur from 26th to 28th July 2018, one day workshop on "Natural / CO2 Refrigeration Systems" for Supermarket and other Applications on 5th October at Anna University, Chennai and two days workshop on Sci lab Programmes from 7th to 8th September 2018 at NCET, Bengaluru.*

- *Mr. Vinod Kumar won the trophy "Best bowler of the tournament" at 3rd PES International staff Cricket tournament organised by PES college, Bengaluru.*

Scientists investigate that which already is; Engineers create that which has never been.

-Albert Einstein...

FACULTY DEVELOPMENT PROGRAM



One Week ***Faculty Development Program*** *was organised by the department from 30/11/2018, to 4/12/2018, on "****THOUGHTFUL COOLING****"which highlighted the need and methods to cool Indian building interiors.*

I cannot teach anybody anything,
I can only make them think.

–Socrates...

INTERNATIONAL CONFERENCE

*Fourth **International Conference** on Innovations and Emerging Trends in Mechanical Engineering **(IIETME2019)** was jointly organised by the Mechanical Department and Gazi University, Turkey in association with ASHRAE Bengaluru and Turkey Chapters, to discuss the latest trends in Mechanical Engineering in which technical papers from various areas of Mechanical Engineering were presented and discussed in different sessions of the conference.*

SEMINARS AND WORKSHOPS

*Two days of Soft skill Training Programme on "**Preparing CV's for Interviews and Group discussion**" was organized in which Ms. Aruna and Ms.Monisha from Dynamic Tek Chennai, shared some good etiquettes to be followed while attending interviews.*

*Talk on **Higher Studies in Foreign Universities** was organised on 31st January 2019.*

Talk on ***Career Guidance by training & placement department***

Talk on ***Higher Studies at UK*** *was organised by training & placement department.*

Two days Seminar on ***"Sharpening Skills, Brighten Careers In HVAC&R"*** *between 23rd & 24th January 2019 at Nimhans Convention Center , Bengaluru was attended by Dr. N. Kapilan,& Mr. Vijaykumar Patil*

The Department also organised software training programme between 25.02.2019 to 01.03.2019 for the benefit of students in which ***Hypermesh software*** *training was given.*

Workshop on ***Natural/Carbon Dioxide Refrigeration System for Supermarket and other applications at IIT,Madras on 5th October 2019.***

Technical Seminar on ***"Computational Fluid Dynamics (CFD)"*** *was organised on 20th September 2018 which introduced ANSYS Fluent analysis software to students.*

Technical Talk on ***"Indoor Air Quality"*** *by Dr.Chandrashekar, Professor, University of Singapore on 25th February 2019.*

Technical Talk *by Dr. Saravanan, Professor, Dept. of Mechanical Engineering, UVCE on March 1st 2019.*

Technical Talk *at KNSIT in association with ISHRAE Bangalore Chapter.*

Technical talk *by Mr Ashok, Centre Head, CADD Centre, Yelahanka on 15th March 2019.*

Two days workshop on ***Non Destructive Testing*** *on 8th & 9th August 2018.*

HOBBY CLUB ACTIVITIES

*Two days workshop on **Photographic skills** was organised by Photography Club on 28th & 29th March 2019.*

INTEGRATED RURAL DEVELOPMENT PROGRAMME

IRD visit of students to ***Marsanahalli and Devasthanahosali Government Higher Primary School,*** *Chikballapur on 5th March 2019.*

Students interacting with school children as part of their ***IRD*** *visit .*

Without engineers
Science is just philosophy.

Interaction about PBL with the students and ***Project based learning (PBL) at Bosch Ltd., Bengaluru.***

Visit of PU students to the department.

Art without engineering is dreaming,

Engineering without art is calculating.

-Steven Roberts

BOE ***meeting*** *held in the department.*

Visit to ***Bosch*** *for MOU.*

Toyota Kirloskar staff at NCET to set up COE.

Visit to ***Ingersoll Rand*** ***for student internship and project work .***

Technical talk on industry 4.0 by ***Dr Wilson Lawrence, Ingersoll Rand.***

Meeting of Department staff to discuss ***Syllabus Revision.***

Periodic ***Parent Teachers Meeting*** *is held in the department to promote better parent -student-teacher interaction.*

National Women Entrepreneurship Conclave (WeCon) *was jointly organized by All India Council for Technical Education (AICTE) and International Institute of Waste Management (IIWM) at Jain University Bengaluru which was an excellent opportunity for 32 girl students of CS, IS, EC, Mech and Civil who participated in the conclave and got an exposure to innovations in waste management sector.*

Farewell Party ÄLVIDA-2019 *was organised for the first outgoing autonomous batch by the department.*

Girls students of our department participated in the foundry visit, ***AMC Plant tour****. Technical talk on pumps at armstrong fluid technology organised by women in ISHRAE Bangalore chapter.*

Students of the Department organised the technical fest ***"Sparko Fiesta"*** *on 23rd March 2019 which was a grand success with 59 teams of 143 participants from 11 different colleges.*

The first grand ***alumni meet "REJOICE 2018"*** *was held at hotel Taj Vivanta on 9th September 2018 . The meet was graced by Director Dr. S G Gopalakrishna, Principal Dr.Srikanta Murthy K, Dr. N.G.S. Udupa and Dr.Hari Bhat K.N. The main agenda of this meet was to form alumni asociation and launching of the alumni portal.*

Graduation Day was celebrated on 21st September 2019 for the first outgoing Autonomous Batch of NCET.

MOU with Mechanical Department, NCET for the year 2019-20

1) Karnataka German Technical Training Institute

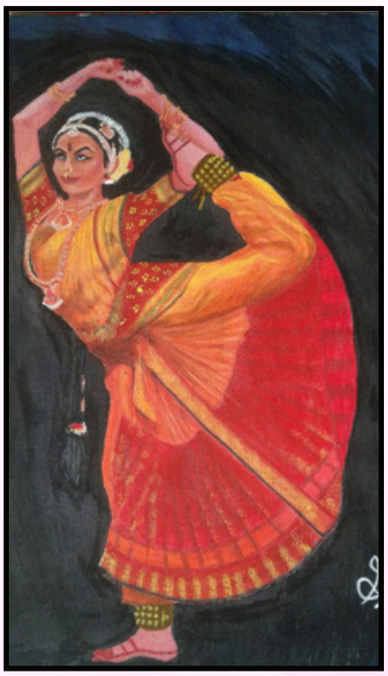
Karnataka German Technical Training Institute (KGTTI) is established by Karnataka German Multi Skill Development Centre (KGMSDC) society.

The primary mission of the Training Center is to conduct a broad based multidisciplinary vocational training in various Industrial Technical Fields, directed towards the development of skills and trades and to become a world class training center that represents specialized trade training programs in alignment with the Industry requirements across the globe.

2) Toyota Kirloskar Motor Pvt Ltd

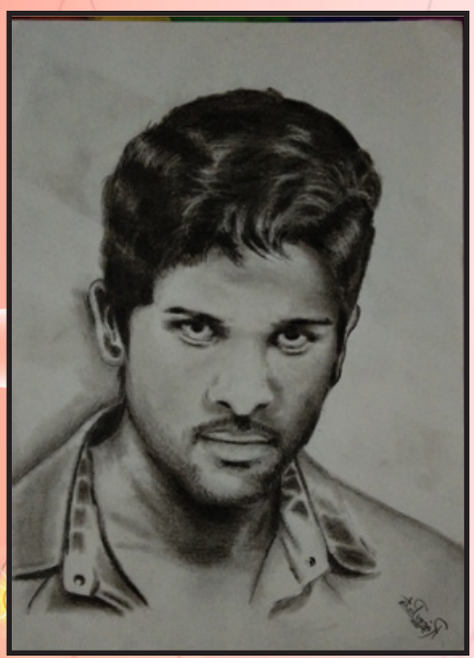
Toyota Kirloskar Motor Pvt Ltd is a subsidiary of Toyota Motor Corporation of Japan(with Kirloskar Group as a minority owner), for the manufacture and sales of Toyota cars in India. It is currently the fourth largest car maker in India after Maruti Suzuki, Hyundai, and Mahindra.

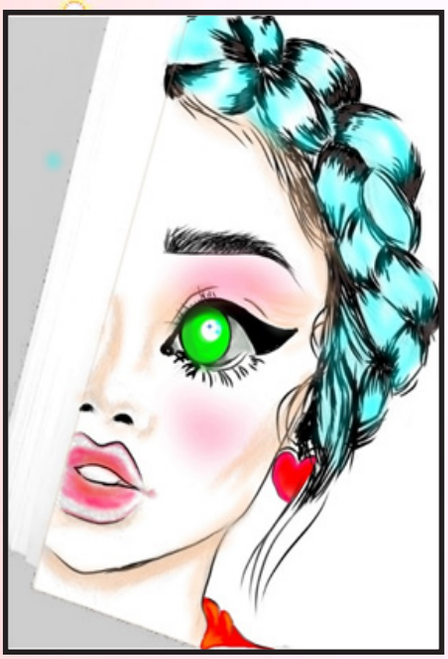
Student Space



Paintings of talented artist
SUHAS NAIDU G V.

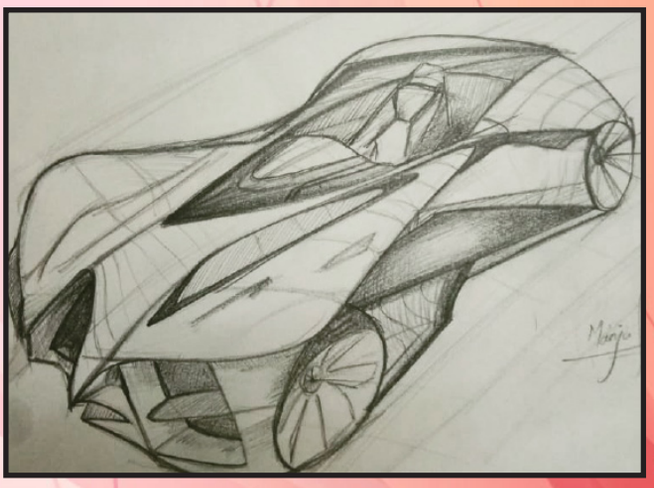
Painting by
MOHAMMED ABDUL AZEEM.

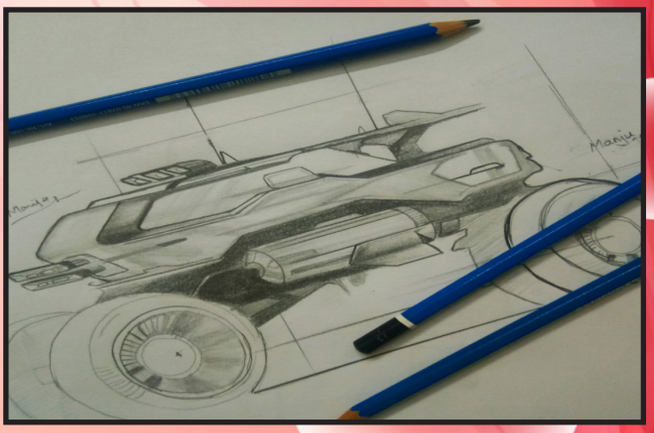




Paintings of talented artist RAJEEV PATRA.

Paintings by LIKHITHA CS.





Design by MANJUNATH K P.

Vision for the year 2018-2019:

To train the students as professionals in Mechanical Engineering blended with leadership qualities to achieve excellence in the challenging future.

Mission for the year 2018-2019:

M1: Maintaining excellence in Mechanical Engineering education through academic professionalism and teaching for the changing needs of the society.
M2: Establishing Centre for research to promote industrial exposure in the area of Mechanical Engineering.
M3: Developing communication skill, leadership qualities, team work and skills for continuing education among the students
M4:Inculcating ethics, human values for solving societal problems and environmental protection
M5:Creating opportunities to the students for experiencing real time problems through project based learning to enhance employability and entrepreneurship.

Program Educational Objectives (PEOs)

The Graduates of Mechanical Engineering are expected to fulfill the following PEOs after few years of their graduation.
PEO-1: Graduates in Mechanical Engineering will apply the basic technical knowledge for design and analysis of mechanical systems.
PEO-2: Graduates in Mechanical Engineering will demonstrate research and innovation skills.
PEO-3: Graduates in Mechanical Engineering will demonstrate good communication skills, dynamic leadership qualities and awareness about environmental protection.
PEO-4: Graduates in Mechanical Engineering who are capable of pursuing higher studies, take up research and development work blended with ethics and human values.
PEO-5: Graduates in Mechanical Engineering who will have the ability to become entrepreneurs thereby switching over from responsive engineering to creative engineering.