



MEDALLIONS NEWS' 21



DEPARTMENT OF MECHANICAL ENGINEERING
NANDHA ENGINEERING COLLEGE

Volume 8 June 20 - May 21





MEDALLIONS NEWS'21

NANDHA ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

Volume 8 June 20 - May 21

Vision

To be a premier centre for learning in Mechanical Engineering in the country.

Mission

- To offer state-of-the-art undergraduate, postgraduate and research programmes in engineering.
- To develop skilled and employable graduates to meet the challenges in emerging fields of Engineering.
- To prepare the students for prosperous career in Engineering / Entrepreneurship by inculcating the leadership qualities with professional and ethical responsibilities for the benefit of the society.
- To encourage Research & Development in the thrust areas of Engineering.

It is my pleasure in congratulating the Department of Mechanical Engineering on the pleasant occasion of releasing the newsletter for the period 2018-2019. It is great to find a considerable number of winners and participants in co-curricular and extra-curricular activities which certainly prove that our faculty members and students are adequately equipped and possess the necessary skill sets to bring such laurels to the institution.

I wish that this number may grow in the years to come. I am sure that publishing a newsletter containing the achievements will be recognition to hard work and I wish them all the very best for future endeavors.



Dr. N. RENGARAJAN, Ph.D.
Principal – NEC.

Welcome and best wishes to all the friends of the department who receive this Newsletter. It has been an interesting and busy semesters for members of the Department. It gives me a great opportunity to present the third issue of “Medallions News -21”. This internal newsletter is one of the ways in which we can disseminate information on the life of the Department. The past semesters were full of various activities by the students and faculty in academic, co-curricular, extra-curricular as well as research and developments. As you read through the pages you would realize, that the department had a successful semester. I would like to thank all my colleagues for their tireless efforts to help the department progress at a very steady pace.



Dr. M. EASWARAMOORTHY,
Ph.D.,
Professor and Dean - Mech.

Learning gives creativity. Creativity leads to thinking.

Thinking provides knowledge. Knowledge makes you great.

Abdul Kalam

ABOUT MEDALLIONS NEWS

The Medallions news is the voice of Mechanical Engineering; it is a newsletter from the department of Mechanical Engineering which mainly focuses on the day-to-day happenings in the department. It speaks and visualizes the events happening in the department and the participation of students in various inter and intra college events. It encourages and brings out the talents of students in various fields.

ABOUT DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical Engineering is the core branch of Engineering and Technology, which plays an important role in the industrial growth of the nation. The department has well equipped laboratories. Besides high quality teaching, the practical knowledge of students is enhanced through expert lectures by eminent persons from industry, and exposing them to industrial activities by industrial visits, in plant training etc. Department has a team of dedicated faculty members, who strive hard to achieve the department's vision and mission in all aspects, the department creates flexible and innovative learning opportunities for students enabling them to enhance theoretical and professional skills. The department had been pioneering many quit-essential activities which lead to the development of the college. Final year U.G. and P.G students have presented and published technical papers based on their projects in National, International journals and conferences.

INFRASTRUCTURE

The department is equipped with 12 diversified laboratories to cater the needs of the students and covering the curriculum specified by Anna University.

LABORATORY FACILITIES

Thermal Engineering Lab

Fluid Mechanics Lab

PG CAD Lab

Heat Power Engineering Lab

Engineering Practices Lab

CAD CAM Lab

Mechatronics Lab

Manufacturing Technology Lab- I

Dynamics Lab

Metrology and Measurement Lab

Manufacturing Technology Lab- II

Research Lab

Industry Supported Labs

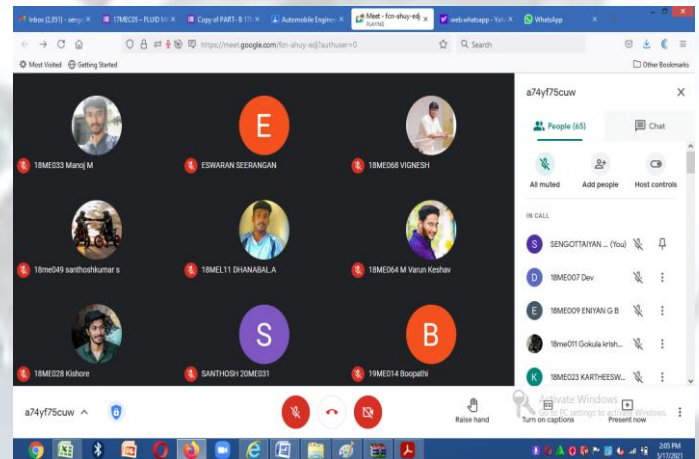
ASSOCIATION INAUGURAL FUNCTION

Inauguration function of the Society of Mechanical Engineers (SOME) at Nandha Engineering College has been conducted successfully on 03-02-2021 through virtual mode. Thiru.V.Shanmugan chairman, Nandha Educational Institution presided over the function. The lightening of the traditional lamp was done in the presence of chief guest Dr. V. S. Saravanam, Junior Vice President, Indoshell Cast Pvt Ltd, Coimbatore.

The Presidential address was given by Thiru. V.Shanmugan, Chairman, Sri Nandha Educational Trust. Principal Address was given by Dr.N.Rengarajan, Principal, Nandha Engineering College. Felicitation address was given by Dr.S.Arumugam, CEO, Nandha Educational Institutions, Thiru. S.Nandhakumar Pradeep, Secretary, Sri Nandha Educational Trust, Thiru. S.Thirumoorthi, Secretary, Nandha Educational Institutions.

Dr. M. Eswaramoorthy, Professor and Dean, Mechanical Engineering, spoke regarding the various activities of SOME. Prof. M.K.Murthi, Head of the Department introduced the office barriers of SOME.

Chief guest Dr. V. S. Saravanam motivated the students regarding the development in the Mechanical field and to make them self ready for the upcoming target in their life.



INTRA DEPARTMENT ACTIVITIES

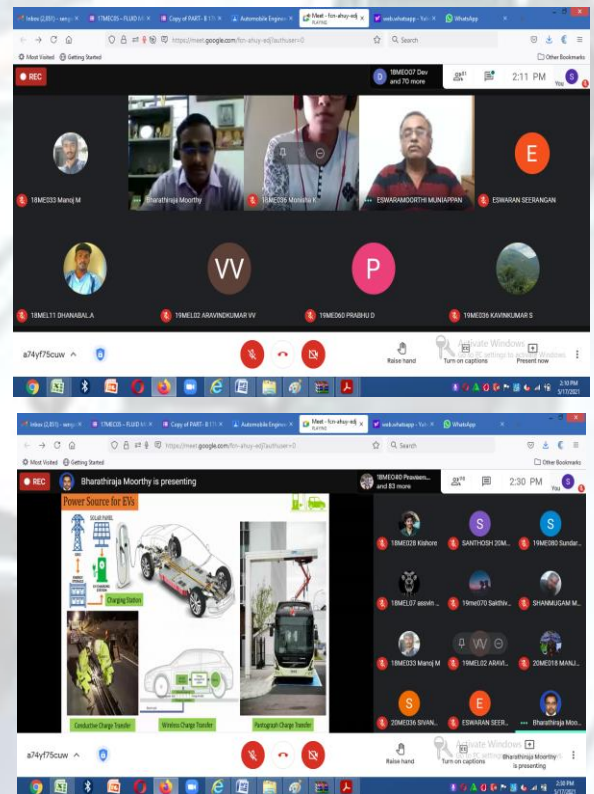
Enhances learning in both the affective and cognitive domains, to provide the opportunity for sharing of ideas and concerns. Our Department Association “Mech Medallions” conducted Intra and Inter Department Activities. Intra Department Competition was conducted on 03-02-2021 through online mode. 100 students were participated from our department.

ACADEMIC SEMINAR

Academic Seminar on “Power Sources for Electrical Vehicle” organized by Department of Mechanical Engineering on 17-05-2021. Dr. M.Bharathiraja, Head of the Department, Department of Automobile Engineering, Bannari Amman Institute of Technology, Sathyamangalam, was the Chief Guest of the Seminar. Thiru.V.Shanmugan, Chairman, Sri Nandha Educational Trust, presided over the function.

Dr.N.Rengarajan, Principal, Nandha Engineering College, Dr.S.Arumugam, CEO, Nandha Educations Institutions, Thiru. S.Nandhakumar Pradeep, Secretary, Sri Nandha Educational Trust, Thiru. S.Thirumoorthi, Secretary, Nandha Educational Institutions and Dr.M.Easwaramoorthy, Dean, Mechanical Engineering have felicitated the gathering.

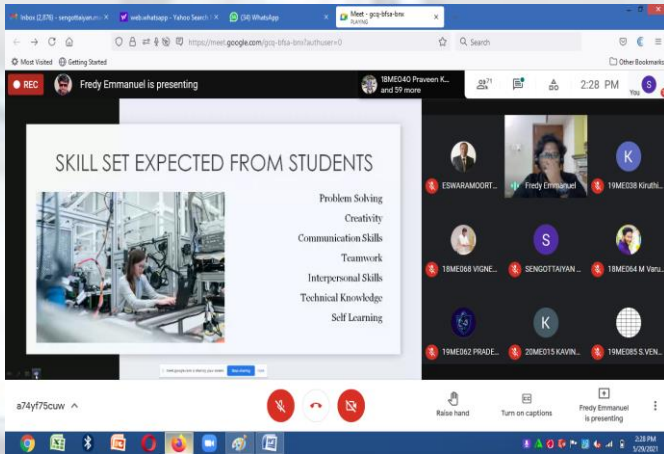
The chief guest Dr. M.Bharathiraja has shared his experience and explored various power sources for Electrical Vehicle.



INDUSTRIAL SEMINAR

Society of Mechanical Engineers has organized an industrial seminar on “Industry Ready Engineers: Road Map for Skill Sets with industry perspective” 29-05-2021.

Dr. M. Easwaramoorthy, Professor and Dean, Department of Mechanical Engineering, inaugurated the seminar. Mr.Ferderick Emmanuel, Design Engineer, Onward Technologies, Bangalore was the chief guest of the occasion. The expert shared their experience on Industry needs at current scenario and what are the skills sets expected by industries in their perspective.



CORONA AWARENESS

Department of Mechanical Engineering, Nandha Engineering College Erode, in collaboration with Elanjie Social Welfare Iyakkam Erode, District Police and Erode Municipal Corporation has organized an awareness programme on Corona Virus Prevention and safety measures on 26.04.2021 (Monday).

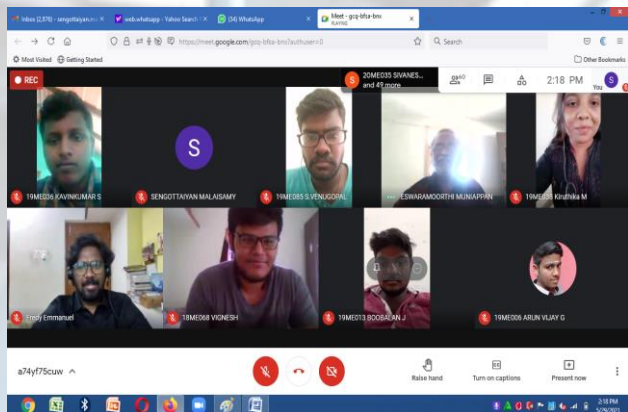
The event was chaired by Veerappan Chatram Inspector of Police in presence of Social Activist Thirumathi S.Janagi, Elanjie Social Welfare Iyakkam, Dr. M. Easwaramoorthy, Dean / Mechanical Engineering, Faculty and Students.

Faculty, students and Elanjie Social Welfare team distributed the leaflets on Corona virus safety ,measure and ways to safeguard individual's, Bus Drivers, Auto Drivers, Passengers and Publics were advised to wear face mask, wash hands, take vaccine and keep social distancing in the crowded area.



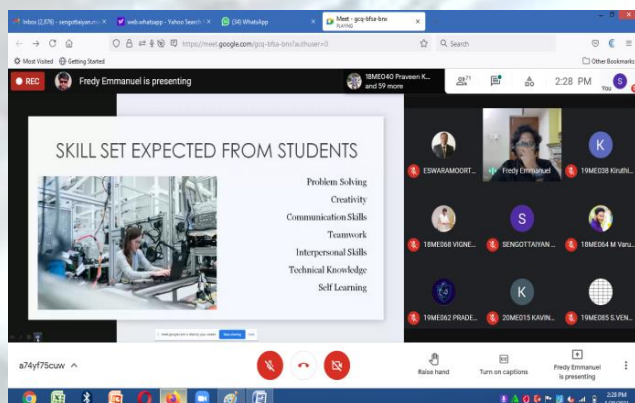
TRAINING PROGRAMME

Department of Mechanical Engineering organizes a Training Programme on Higher Education and Gate Exam preparation from 12.05.2021 TO 17.05.2021. The training was given by Mr. R. Vivekanandhan Gate Educator.



WEBINAR

Department of Mechanical Engineering organizes a webinar on Preparation Strategy for Competitive Exams & Higher Studies through Gate on 20.05.2021. The training was given by Mr. R. Vivekanandhan Gate Educator, Chennai.



ALUMNI INTERACTIONS

Department of Mechanical Engineering organizes an Alumni Interactions on various topics by the Alumina of Department of Mechanical Engineering, Nandha Engineering College.

The details of Alumni interactions are

- ❖ Mr. JEEVA.M, Design Engineer, L & T Technology Service Pvt. Ltd, Chennai has participated and interacted with students on 01.05.2021.
- ❖ Mr. VINOTH KUMAR.M, Assistant Manager/Program Management, Tata Toyo Radiator Ltd, Pune has participated and interacted with students on 08.05.2021.
- ❖ Mr. Dinesh Kumar. S, Software Design Analyst, Navistar Defense LLC, Bangalore has participated and interacted with students on 15.05.2021.
- ❖ Mr.Naveen Kumar. S, Associate Engineer, Roots Cast Pvt Ltd, Coimbatore has participated and interacted with students on 22.05.2021.

PUBLICATIONS

The list of journals published by faculty and students are

- Dr. M. Easwaramoorthi, T. Venkateshan, S. Balakrishnan (2021) “ Redesigning of Piston Head and Air Flow through the combustion chamber using CFD”, Design Engineering, Volume 2021, Issue 5, pp. [1422- 1432]
- Dr. M. Muthukumar, Senthil Kumar A P, Sasikumar C, Yuvaraj S, Thokchom Subhaschandra Singh (2021) “Effect of nano-particles on the droplet combustion of rice bran oil biodiesel”, Biomass Conversion and Biorefinery, ISSN: 2190 6815, <https://doi.org/10.1007/s13399-020-01209-8>
- Dr. M. Muthukumar, Rengarajan Narayanan, Karthikeyan Manoharan, Magesh Kannan Vijayakrishnan, Karthikeyan Palaniswamy, Smagul Karazhanov, Senthilarasu Sundaram (2021) “Scaling up Studies on PEMFC Using a Modified Serpentine Flow Field Incorporating Porous Sponge Inserts to Observe Water Molecules”, MDPI, ISSN: 1420 3049, Molecules 2021, 26, 286, <https://doi.org/10.3390/molecules26020286>
- V. Chandramohan, T. Ragunath, S. Sanjith, G. Santhoshvishnu, N. Vivek (2021) “Design and Fabrication of Automated Sand Filter and Waste Separator Machine”, International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 9, Issue 3, pp. [382-385]
- M. Sampath Kumar, N. Rathna Kumar, P. Sampath Kumar, K. A. Sanjaykanth, S. Santhosh Guhan (2020) “Nox Reduction by using Adsorption Technique”, International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 9, 2020
- M. Sengottaiyan, A. Abdul Ajece, M. Gokulam, N. Gowrisankar, J. Jeslin Raj (2020) “Design and Fabrication of Automatic Floor Cleaning Machine”, International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 9, Issue 3, pp. [386-391]

- M. Sugumar, M. Arun Kumar, S. Bharanidharan, T. Dinesh Kumar, G. Hariprasath (2020) "Analysis of Condenser with Composite Material using CFD", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 10, pp. [583-589]
- M. Sugumar, P. Nishanth, K. Prasanth, K. Prasanth, R. Praveen (2020) "Fabrication of Locomotive Treadmill Vehicle with Power Generation", AEGAUM JOURNAL, ISSN NO: 0776-3808, Volume 8, Issue 8, pp. [93-99]
- S. Eswaran, A. Raghul, D. Rahul, S. Sudhakar, M. Vignesh (2021) "Design and Fabrication of Automatic Brake Failure Indication", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653; Volume 9, Issue 3, pp. [79-83]
- S. Muruganantham, S. Aravind, S. Gowtham, M. Harishankar, S. Nithiskumar (2020) "Design and Fabrication of Multipurpose Mechanical Machine", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 9,
- S. Muruganantham, S. Deepanchakkaravarthi, S. Mahendra Kumar, S. Muknesh, K. Raja sreethar (2020) "Design and Fabrication of Seed Sowing and Spraying Machine for Agriculture", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653; Volume 8, Issue 10, pp. [396-401]
- S. Muruganantham, Sivanantham P, Sudharsan P, Jothi Ragavan E, Ramji N. (2021) "Design and Fabrication of Multipurpose Agricultural Machine", International Research Journal of Engineering and Technology, E-ISSN: 2395-0056, Volume 08, Issue: 03, pp. [1073-1076]
- S. Muruganantham, Karthick. K, Prasanth. K, Ragul. D, Sriram. K (2021) "Design and Fabrication of Foldable Smart E-Cycle", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653,

- Subramaniam Shankar, M. Manikandan, G. Raja, G. Suganya Priyadharashini, Alokesh Pramanik (2021) "Experimental studies on viscosity, thermal and tribological properties of vegetable oil (kapok oil) with boric acid as an additive", Micro & Nano Letters, ISSN: 1750-0443, DOI: 10.1049/mna2.12045, pp. [1-10]
- Subramaniam Shankar, Murugasamy Manikandan, Gunasekaran Raja, Alokesh Pramanik (2020) "Experimental investigations of vibration and acoustics signals in milling process using kapok oil as cutting fluid" Mechanics & Industry, ISSN : 2257-7777, Volume 21, (5) pp. [1-10]
- S. Shankar , M. Manikandan, D. K. Karupannasamy, C. Jagadeesh, Alokesh Pramanik, Animesh Kumar Basak (2021) "Investigations on the tribological behaviour, toxicity, and biodegradability of kapok oil bio-lubricant blended with (SAE20W40) mineral oil", Biomass Conversion and Biorefinery, ISSN: 2190-6815, 4 Mar 2021.
- B. Velliyangiri, R. Parthipan, S. Thanikachalam , P. Velprabakaran , V. Vijay (2021) "Helmet Based Vehicle Safety with Drunk and Drive System", International Research Journal of Modernization in Engineering Technology and Science, e-ISSN: 2582-5208, Volume 3, Issue 5, May 2021, pp. [959-965]
- B. Velliyangiri, Nithish M S, Ravi Shankar M, Surenderan S, Subash N (2021) "Design and Fabrication of Manual and Electric Operated Tricycle for Medically Affiliated People", International Research Journal of Modernization in Engineering Technology and Science, e-ISSN: 2582-5208, Volume 3, Issue 4, April 2021, pp.[872-875]
- D. Ravichandran, M. Dharun Sankar, M. Gokul Rokith, R. Hariharan, S. Kamesh (2020) "Design and Analysis of Exhaust Valve of an IC Engine by using Finite Element Analysis", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 9, pp. [868-875]

- M. Mohamed Ajmal Mahasin, S. Arulselvan, S. Giri Shankar, P. Gowtham, P. Kannan (2021) "Design and Fabrication of Pesticides Sprayer for Agricultural", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 9, Issue 2, pp. [457-459]
- M. Mohamed Ajmal Mahasin, E. Abishek, V. S. Ahish, V. Murugan, R. Settu (2021) "Modeling and Analysis of Different Vortex Generators for Sedan Type and Hatch Back Type Cars", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 9, Issue 3, pp [258-273]
- M. Mohamed Ajmal Mahasin, Srinath V, Sudhagar B, Surendher S, Vikneswaran K (2020) "Fabrication and Analysis of Brake Pad using Natural Fiber Reinforced Composite", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 10, pp. [745-752]
- G. Kannan, R. Madhan, S. Nisanth, P. Prakash, K. Karthick (2020) "Yield Improvement S.G Iron in Shell Moulding", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 10, pp. [753-754]
- S. Balakrishnan, C. M. Avinash, R. Bharathi, D. Hari Haran, V. Jeganathan (2020) "Design and Fabrication of Water Treatment by using Solar Illumination and TiO₂", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 9, pp. [1174-1179]
- S. Balakrishnan, Rajesh K, Sivaraman P, Tanikasalam S S, Panneer Selvam K (2021) "Design and Fabrication of Solar Seed Sowing and Water Spraying Machine", International Research Journal of Engineering and Technology (IRJET), E-ISSN: 2395-0056, Volume 8, Issue 3, pp. [3158 – 3161]

- T. Venkateshan, Logesh R, Mohandass S, Naveenkumar M, Prakadeesh S. K (2020) "Design and Fabrication of Laser Operated Measurement of Head Valve Seat in Diesel Engine", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 12, pp. [888-893]
- T. Venkateshan, S. Abineshwaran, C. Deepakkumar, M. Dharanidharan, S. Guruprasanth (2020) "Optimization of Flow Configuration of Solar Flat Plate Collector", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 10, pp. [448-456]
- M. A. Omprakas, M. Muthukumar, S. P. Saran, D. Ranjithkumar, C. M. Shantha kumar, S. Thiruppathi Venkatesh, M. Sengottuvelan (2021) "Analysis of Shrinkage Defect in Sand Casting by using Six Sigma Method with Taguchi Technique", Materials Science and Engineering, ISSN: 1059-012047, 2021.
- R. Rajkumar, C. Anjith Kumar, P. Deepak Raj, S. Gandhiraj, R. Manikandan (2020) "Steam Pipe Insulation using Silica Aerogel and Coconut Fibre Composite", International Journal for Research in Applied Science & Engineering Technology, ISSN: 2321-9653, Volume 8, Issue 10, pp. [517-521]

ONE CREDIT COURSES

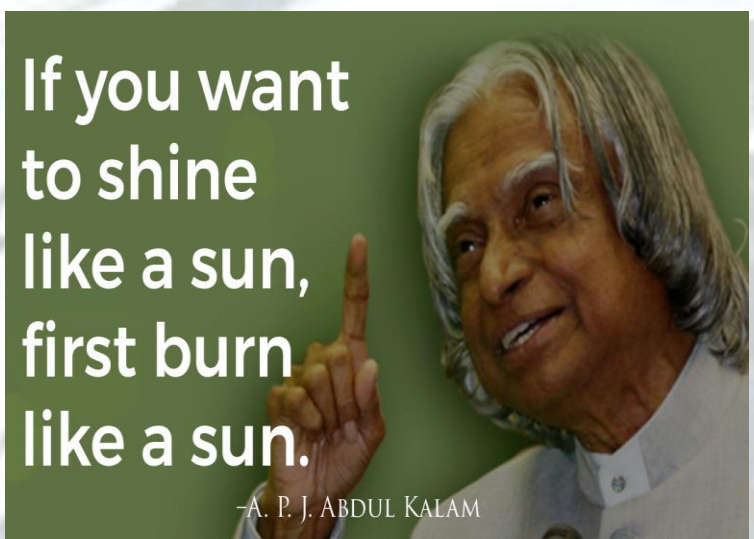
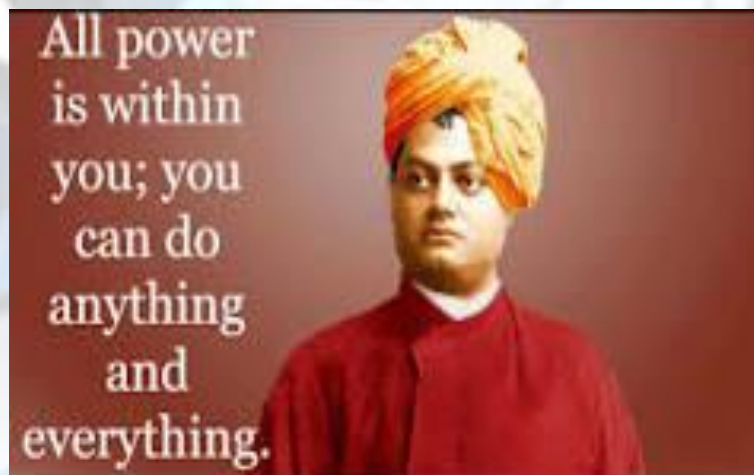
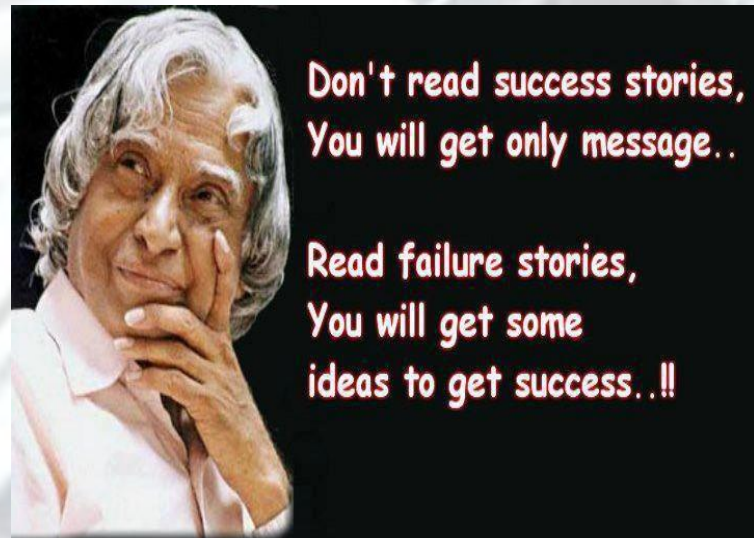
The details of one credit course conducted are as follows.

- ✚ One credit course on "Lean Manufacturing with 5S & Kaizen" organized by Department of Mechanical Engineering on 08/04/2021 & 09/04/2021, offered by Roots Industries, Coimbatore. 73 students have registered and attended the course.
- ✚ One credit course on "Statistical Process Control" organized by Department of Mechanical Engineering on 15/04/2021 & 16/04/2021, offered by Roots Industries, Coimbatore. 83 students have registered and attended the course.

✚ One credit course on “Geometric Dimensioning and Tolerancing” organized by Department of Mechanical Engineering on 21/01/2021, 22/01/2021 & 23/01/2021, offered by Roots Industries, Coimbatore. 82 students have registered and attended the course.

✚ One credit course on “Statistical Process Control” organized by Department of Mechanical Engineering on 24/11/2020, 25/11/2020 & 26/11/2020, offered by Roots Industries, Coimbatore. 93 students have registered and attended the course.

✚ One credit course on “Press Tool Design and construction for sheet Metal” organized by Department of Mechanical Engineering on 22/11/2020, 25/11/2020 & 26/11/2020 offered by Standard Enterprises Pvt. Ltd, Madurai. 57 students have registered and attended the course.



ACADEMIA

- **SEMINAR**
- **WORKSHOP**
- **TRAINING PROGRAMMES**
- **ACHIEVEMENTS**
- **AWARDS**

EDITORIAL BOARD

Dr. N. Rengarajan, Ph.D., Principal, NEC

Dr. M. Easwaramoorthy, Ph.D., Dean – Mech.

Mr. S. Muruganantham, M.E., AP – Mech.



NANDHA ENGINEERING COLLEGE (Autonomous)

Approved by AICTE, New Delhi, Accredited by NAAC & NBA,

Affiliated to Anna University, Chennai.

Erode – Perundurai Main Road, Erode – 638052, Tamil Nadu.