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**MECHANICAL
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MECHANICAL ENGINEERING DEPARTMENTAL NEWSLETTER



Narsimha Reddy
Engineering College...
సకలసేవ రెడ్డి
ఇంజనీరింగ్...



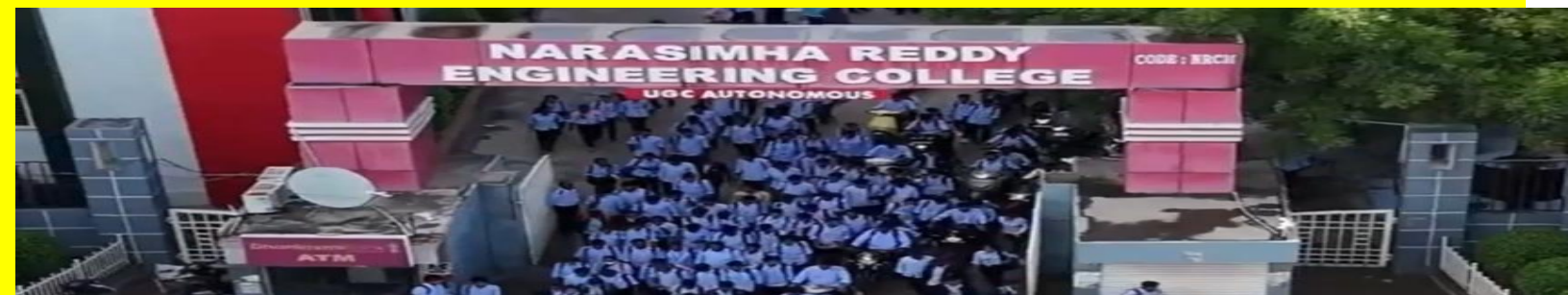
NARSIMHA REDDY ENGINEERING COLLEGE

Maisammaguda (V), Kompally - 500100, Secunderabad, Telangana State, India

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E-mail: principal@nrcmec.org

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CHAIRMAN'S MESSAGE



Sri. J. Narasimha Reddy founder and Chairman

The Narasimha Reddy Engineering College has been established with the main motto of imparting. The quality technical education catering to the needs of Telangana state. The institution strives to have high standards in professional education and working accordingly for high class facilities to all the departments. It is an immense pleasure to me for the Department of Mechanical Engineering pacing towards endeavoring high standards and successfully bringing out bi-monthly news letter for disseminating the departmental activities in the various areas of Mechanical Engineering.

DEPARTMENT OF MECHANICAL ENGINEERING

HOD MESSAGE



Engineering advancements happening in the world's workshop, so with the standard of engineering consistently rising, mechanical engineering is creating ripples in the technology world. The department is established in the year 2007 with an intake of 60 and the number is increased up to 90 in 2009 and 120 in 2013. The department is headed by Dr. M. Ashok Kumar. Mechanical Engineering is a fast-growing discipline in tune with the demands in the core areas of infrastructure and Manufacturing



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MECHANICAL ENGINEERING STUDENT ASSOCIATION



The purpose of a student organization is to bring everyone together based on their interests and build relations. Student organization recognitions purpose is to create connections expand skills and explore different elements university life while making lifelong friends.



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About Mechanical Engineering Department



The Department of Mechanical Engineering is one of the oldest departments of NRCM and has evolved into one of the finest in terms of teaching curriculum and methodology supported by a well-organized and adequately funded research program and imparting technical education while promoting professional ethics in engineering education. Engineering advancements happening in the world's workshop, so with the standard of engineering consistently rising, mechanical engineering is creating ripples in the technology world.

It is endowed with sufficient number of faculty as per the AICTE norms and well established labs with advanced features. All faculties are holding M.Tech degrees and some of them are working for their PhD.

INSIDE THIS ISSUE:

1. Departmental Activities
2. Students Achievements and Activities
3. Research Publications

Vision

To provide a professional and conducive environment to foster outcome-based teaching learning with intellectual, ethical, and cultural sensitivities to lead in the field of Mechanical Engineering.

Mission

M1: *To produce skilled graduates with leadership qualities and team working abilities, thus enhancing their employability and self-sustainability in the environment.*

M2: *To emerge as a centre for research & consultancy in the field of Mechanical Engineering and be an incubation centre for Technocrats.*

M3: *To inculcate the habit of continuous learning through advanced technologies with ethical values.*



Industrial Visit:



The Department of Mechanical Engineering organized an industrial visit for IV Batch students on Mar 11th with the objective of gaining knowledge in Automobile Engineering and to get practical concept of Design of Machine Members. The students went on one day industry CYMTECH for having an industrial exposure enabling enhance their subject knowledge of operations and maintenance of machines. About 60 students attended this program under the guidance of Mr. Bhimappa Yadahalli and Mr. Sai Syam.



SEMINAR CONDUCTED ON HIGHER STUDIES:

A Seminar on Higher Studies for young generation about higher studies': Institution's Innovation Council - Narsimha Reddy Engineering College Organized the event in collaboration with Mechanical Engineering department by the resource person **Rebecca Kehe** Professor, International admission and recruitment specialist.



PARTICIPATED IN SUDHEE IN CBIT COLLEGE:



Students from Mechanical Branch Fourth year were participated in Chaitanya Bharati Institute Technology college attending the events.

Publications

The department of Mechanical Engineering is proud to announce that the final year students have published the paper on "EVALUATION OF WASTE PLASTIC OIL-BIODIESEL BLENDS AS ALTERNATIVE FUELS FOR DIESEL ENGINES". The entire Department is congratulating the team for their hard work, dedication, and outstanding skills in this field and HOD Dr.Prof. M .Ashok kumar deeply appreciate every member of this team for showing relentless effort for this project.



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UGC Approved (2017), Peer Reviewed and Refereed Journal
Volume:13, Issue:4(2), April: 2024
Scopus Review ID: A2B96D3ACF3FEAZA
Article Received: 2nd April 2024 : Date of Publication:30th April 2024
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf
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EVALUATION OF WASTE PLASTIC OIL-BIODIESEL BLENDS AS ALTERNATIVE FUELS FOR DIESEL ENGINES

Shaik Jakeer, Kalakonda Sathish, Naikoti Sunil kumar and Thippani Abhilash
IV – Year Students Mechanical Engineering, Narsimha Reddy Engineering College, Maisammaguda (V), Kompally,Secundrabad,Telangana State, India

Abstract:

This study examined the use of waste plastic oil (WPO) combined with biodiesel as an alternative fuel for diesel engines, also commonly known as compression ignition engines, and focused on comparison of the basic physical and chemical properties of fuels, engine performance, combustion characteristics, and exhaust emissions. A preliminary study was conducted to determine the suitable ratio for the fuel blends in consideration of fuel lubricity and viscosity, and these results indicated that 10% biodiesel—derived from either palm oil or castor oil—in waste plastic oil was optimal. In addition, characterization of the basic properties of these fuel blends revealed that they had higher density and specific gravity and a lower flash point than diesel fuel, while the fuel heating value, viscosity, and cetane index were similar. The fuel blends, comprised of waste plastic oil with either 10% palm oil biodiesel (WPOP10) or 10% castor oil biodiesel (WPOC10), were selected for further investigation in engine tests in which diesel fuel and waste plastic oil were also included as baseline fuels. The experimental results of the performance of the engine showed that the combustion of WPO was similar to diesel fuel for all the tested engine loads and the addition of castor oil as compared to palm oil biodiesel caused a delay in the start of the combustion. Both biodiesel blends slightly improved brake thermal efficiency and smoke emissions with respect to diesel fuel. The addition of biodiesel to WPO tended to reduce the levels of hydrocarbon- and oxide-containing nitrogen emissions. One drawback of adding biodiesel to WPO was increased carbon monoxide and smoke. Comparing the two biodiesels used in the study, the presence of castor oil in waste plastic oil showed lower carbon monoxide and smoke emissions without penalty in terms of increased levels of hydrocarbon- and oxide-containing nitrogen emissions when the engine was operated at high load.

Keywords: Waste Plastic Oil; Biodiesel; Castor Oil; Emission; Diesel Engine

The Seminar on "Innovation, ideation & entrepreneurship on 3D Printing" for NRCM Mechanical final year students, scheduled on 08-06-2024, is a proactive initiative to apply knowledge gained in classrooms to practical scenarios. It's a valuable opportunity for students to evaluate their theoretical learning in a hands-on environment, ultimately enhancing their overall comprehension of the field.



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Organized by
Department of Mechanical Engineering
Association with Institution's
Innovation Council 5.0

Resource person

Dr. A. Raveendra
Professor
Department of Mechanical Engg
MREC(A), Telangana

10:00 AM to 01.00 PM
08-06-2024, Saturday
Venue: M.T
Block Seminar
Hall

CONVENOR : Dr. M ASHOK KUMAR
CO-CONVENOR: Y BHIMAPPA
Coordinator : B RAMYA

99516 88777 90009 95454 | www.nrcmec.org



Students in Mechanical engineering laboratory





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NPTEL & FDPS

Mr. Subhrajit Sahoo, an Assistant Professor, Mechanical branch, NRCM has achieved the quintessential excellence in his academic pursuits. His veracity and sanguine spirit in taking the inter branch courses through NPTEL Programme on "Programming, Data structure and Algorithm Using Python" at IIT Madras are truly resplendent.



NPTEL Online Certification
(Funded by the MoE, Govt. of India)



This certificate is awarded to
SUBHRAJIT SAHOO
for successfully completing the course
Programming, Data Structures and Algorithms using Python
with a consolidated score of **58** %

Online Assignments	23.75/25	Proctored Exam	34.61/75
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Total number of candidates certified in this course: **2042**


Devendra Jalihal
Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Jan-Mar 2024
(8 week course)


Prof. Andrew Thangaraj
Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras



Indian Institute of Technology Madras



FREE ONLINE EDUCATION
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Roll No: NPTEL24CS45S557103589 To verify the certificate  No. of credits recommended: 2 or 3

NRCM Mechanical Engineering faculty Mr. R. Sai Syam who is assistant professor, published Patent on "Exploring the positive impact of ML and social media on academic performance and mental well-being in the smart learning era: a student perspective" and attended an FDP on "Emerging Tools and Techniques in Cloud Computing & Data Science".

This commendable initiative showcases his dedication to professional up gradation, leveraging valuable skills in a field that is ubiquitously relevant in today's technological landscape.

(12) PATENT APPLICATION PUBLICATION	(21) Application No. 202441042093 A
(19) INDIA	
(22) Date of filing of Application :30/05/2024	(43) Publication Date : 07/06/2024
(34) Title of the invention : EXPLORING THE POSITIVE IMPACT OF ML AND SOCIAL MEDIA ON ACADEMIC PERFORMANCE AND MENTAL WELL-BEING IN THE SMART LEARNING ERA: A STUDENT PERSPECTIVE	
(51) International classification :G06Q005000000, G06Q0030020000, G06Q0050200000, G09B0007000000, H04L0051520000	(71)Name of Applicant : 1)Ravi Raja Akurathi Address of Applicant :Assistant Professor, ECE Department, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Krishna, Andhra Pradesh, 520 007, India ----- 2)Dr Vijayalakshmi Chintamaneni 3)Mr. Sunil Narasware 4)Sajin R Nair 5)Dr. Kamini Sharma 6)Dr.D.Saraswathi 7)Dr. Nidhi Agrawal 8)Anthony Savio Herminio Da Piedade Fernandes 9)Devi G 10)R Sai Syam 11)Vandana Salve 12)Vishwayogita Savalkar
(86) International Application No :NA Filing Date :NA	Name of Applicant : NA Address of Applicant : NA
(87) International Publication No :NA	(72)Name of Inventor : 1)Ravi Raja Akurathi Address of Applicant :Assistant Professor, ECE Department, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Krishna, Andhra Pradesh, 520 007, India ----- 2)Dr Vijayalakshmi Chintamaneni Address of Applicant :Associate Professor, Department ofECE, Vignam Institute of Technology and Science,Hyderabad, Yadadri bhuvanaguru, Telangana, India ----- 3)Mr. Sunil Narasware Address of Applicant :Librarian (Associate Professor), Nagar Parishad Shivaji Mahavidyalaya, Mowad, Th. Narkhed, Dist. Nagpur, Maharashtra, Pincode-431303, India ----- 4)Sajin R Nair Address of Applicant :Assistant Professor/CSE-DS, Malla Reddy College of Engineering, Maisammaguda, Dulapally, Telangana, 500100, India -----
(61) Patent of Addition to Application Number :NA Filing Date :NA	5)Dr. Kamini Sharma Address of Applicant :Ex Associate Professor DYP University, Nerul, New Mumbai, Thane, Maharashtra, India ----- 6)Dr.D.Saraswathi Address of Applicant :Associate professor, Department of Computer Science,PSG College of Arts & Science, Coimbatore, Tamilnadu -641014, India ----- 7)Dr. Nidhi Agrawal Address of Applicant :Institute of Technology & Science,Mohan Nagar, Ghaziabad, Uttar Pradesh, India -----
(62) Divisional to Application Number :NA Filing Date :NA	8)Anthony Savio Herminio Da Piedade Fernandes Address of Applicant :Founder Owner, Trading Equations, 54/C, Xell, Bastora, Bardez,North Goa, Goa, (403507), India ----- 9)Devi G Address of Applicant :Assistant Professor /CSE, SNS college of Technology, Coimbatore, Tamilnadu- 641035, India ----- 10)R Sai Syam Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Narsimha Reddy Engineering College, Secunderabad, Medchal Malkajguri, Telangana, 500100, India -----



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Certificate ID: NRCMCSE30



Certificate of Participation



This is certify that Dr/Mr/Ms/Mrs.

R SAI SYAM, Asst. Professor, MECH, NRCM

has Participated and Successfully completed a One-Week Online Faculty Development Programme on "Emerging Tools & Techniques in Cloud Computing & Data Science" Organized by the School of Computer Science and Engineering, Narsimha Reddy Engineering College, Hyderabad, in collaboration with the Computer Society of India, Hyderabad Chapter, From February 19th-24th, 2024.

 Dr. R. Lokanadham Principal	 Dr. B. Ramasubba Reddy Dean - CSE	 Dr. A V L N Sujith HoD - CSE	 Dr. P. Dileep Kumar Reddy Convener
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Ms. Dunga Simhana Devi, Ms.B Ramya and Mr.R Sai Syam Assistant Professors, ME Dept., participated One-week online International FDP on **“Advancements in Automobile Engineering for Sustainable Development”** .

Participating in such programs not only earns their accolades within the academic community but also equips them with the tools to impart cutting-edge knowledge to the students. It's an exemplary effort towards fostering academic excellence and staying at the forefront of education.

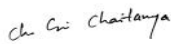
VNR VIGNANA JYOTHI INSTITUTE OF
ENGINEERING AND TECHNOLOGY, HYDERABAD



CERTIFICATE OF PARTICIPATION

Ms. Dunga Simhana Devi

Assistant Professor , Mechanical Engineering , Narsimha Reddy Engineering college (UGC Autonomous) has participated in the **One-week online International Faculty Development Program** on **“Advancements in Automobile Engineering for Sustainable Development”** from 24th to 28th June 2024, organized by the **Department of Automobile Engineering**, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad in association with the SAE Collegiate Club of VNRVJiet.



Dr. Ch. Sri Chaitanya
Coordinator, Asst. Prof, AE



Dr. T. Srinivasa Rao
Prof. & Head, AE



Dr. C. D. Naidu
Principal

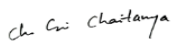
VNR VIGNANA JYOTHI INSTITUTE OF
ENGINEERING AND TECHNOLOGY, HYDERABAD



CERTIFICATE OF PARTICIPATION

Ms. Ramya

Assistant Professor , Mechanical Engineering , Narshimha Reddy Engineering College has participated in the **One-week online International Faculty Development Program** on **“Advancements in Automobile Engineering for Sustainable Development”** from 24th to 28th June 2024, organized by the **Department of Automobile Engineering**, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad in association with the SAE Collegiate Club of VNRVJiet.



Dr. Ch. Sri Chaitanya
Coordinator, Asst. Prof, AE



Dr. T. Srinivasa Rao
Prof. & Head, AE



Dr. C. D. Naidu
Principal



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SAE Collegiate CLUB OF VNRVJIET

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Ch. Sri Chaitanya

Dr. Ch. Sri Chaitanya
Coordinator, Asst. Prof, AE

[Signature]

Dr. T. Srinivasa Rao
Prof. & Head, AE

[Signature]

Dr. C. D. Naidu
Principal

VNR VIGNANA JYOTHI INSTITUTE OF
ENGINEERING AND TECHNOLOGY, HYDERABAD



SAE Collegiate CLUB OF VNRVJIET

CERTIFICATE OF PARTICIPATION

Mr. R SAI SYAM

Assistant Professor, Mechanical Engineering, Narsimha Reddy Engineering College has participated in the **One-week online International Faculty Development Program** on **"Advancements in Automobile Engineering for Sustainable Development"** from 24th to 28th June 2024, organized by the **Department of Automobile Engineering**, VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad in association with the SAE Collegiate Club of VNRVJIET.

Ch. Sri Chaitanya

Dr. Ch. Sri Chaitanya
Coordinator, Asst. Prof, AE

[Signature]

Dr. T. Srinivasa Rao
Prof. & Head, AE

[Signature]

Dr. C. D. Naidu
Principal

MESSAGES



Dear NRCM,

Thank you for being the foundation of my academic and personal growth. My time at [College Name] shaped who I am today—providing not only knowledge but also friendships, memories, and lessons that will stay with me forever.

From inspiring professors and challenging coursework to the vibrant campus life, every moment was a stepping stone to my future. I'll always cherish the late-night study sessions, the laughter with friends, and the sense of belonging that I found in your halls.

With gratitude and love,
SHAIK JAKEER
21X05A0349

To my beloved NRCM,

Looking back, I realize how much you've impacted my life in ways I could never have imagined. You weren't just an institution; you were a second home where I discovered my passions, built lifelong relationships, and learned to dream bigger.

The guidance of professors, the support of friends, and the vibrant campus experiences all played a part in shaping the person I am today. I will forever carry the lessons and memories with me, no matter where life takes me.

Thank you for being the foundation of my journey. I'll always be proud to call myself an alumnus/alumna of NRCM.

Forever grateful,
SIPRAN DURGAPRASAD
21X05A0352

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HOD ME DEPT.

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