

R K COLLEGE OF ENGINEERING (Accredited by NAAC with 'A' Grade)

Kethanakonda (V), Ibrahimpatnam (M), Vijayawada, AMARAVATI-521456.

7.3.1 - Portray the performance of the Institution in one area distinctive to its priority

- Eco friendly green campus
- Biodiesel Plant
- Microsoft Azure Lab
- Financial assistance

About RK College of Engineering:

R K College of Engineering sponsored by R K Educational Society established in the year 2008 by Sri M.M. Kondaiah, Chairman of Educational Society, Managing Director R. K. Township Group having many branches all over Andhra Pradesh, also Treasurer of Gokul Krishna College of Engineering, Sullurepet, Nellore Dist., with a motive to offer top quality technical education and to mold the younger generation with the spirit of service to society. The management has spared efforts to induct dedicated faculty and provide adequate infrastructure facilities. The college is affiliated with Jawaharlal Nehru Technological University Kakinada and is also approved by the All India Council for Technical Education, New Delhi.

• Eco friendly green campus

Environmental conscious administration, the management, and the college students look after the environment carefully. Every year, during the rainy season, we do tree plantation and carefully look after it. It's our responsibility to preserve the work done on the campus related to maintaining an Eco-friendly green campus. Eco-friendly green pleasant environment spread over the entire campus with black top roads and either side coconut plants.

• Biodiesel Plant

R K College of Engineering provided the best opportunity to establish a research center on the green campus. The biodiesel plant established in the campus is worth of 2 lakhs INR and the same amount is sponsored by the diva's foundation. The waste cooking oil is used to prepare biodiesel through the transesterification process. The produced biodiesel is used to run diesel generators and also few research scholars have purchased it for research activities.

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Microsoft Azure Lab

Azure Lab Services enables instructors to easily build a customized, cloud-based computing lab environment for their students. It provides a virtual sandbox where students can work directly in the system and make changes to understand how IT concepts work in the real world. With Azure Lab Services, instructors can focus on teaching and hands-on application, while the service handles the infrastructure management.

• Financial assistance

We, at R K College of Engineering, seek to break the socio-economic barriers that hold students back from pursuing their academic dreams. In addition to offering them scholarships and concessions, the university also helps students apply for scholarships and loans with the government and with private and public organizations. The management of R K College of Engineering provides financial assistance for department topper students every year.

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7.3 - Institutional Distinctiveness

Eco friendly green campus

Environmental conscious administration, the management, and the college students look after the environment carefully. Every year, during the rainy season, we do tree plantation and carefully look after it. It's our responsibility to preserve the work done on the campus related to maintaining an Eco-friendly green campus. Eco-friendly green pleasant environment spread over the entire campus with black top roads and either side coconut plants.



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Biodiesel Plant

R K College of Engineering provided the best opportunity to establish a research center on the green campus. The biodiesel plant established in the campus is worth of 2 lakhs INR and the same amount is sponsored by the diva's foundation. the waste cooking oil is used to prepare biodiesel through the transesterification process. The produced biodiesel is used to run diesel generators and also few research scholars have purchased it for research activities.

The biodiesel is prepared from waste cooking oil through transesterification. The Waste Cooking Oil Methyl Ester (WCOME) blends are prepared by adding an appropriate quantity of pure diesel. The WCOME blends are allowed to find fuel properties, where all WCOME blends exhibit similar results compared to diesel fuel. The pure diesel and WCOME blends are used as fuel to run the diesel engine, where engine characteristics are evaluated. The analysis may reveals the WCOME-B10, WCOME-B20 and WCOME-B30 achieve maximum BTE and minimum BSFC among the different WCOME blends, and also WCOME-B10, WCOME-B20 and WCOME-B30 achieve maximum BTE and minimum BSFC among the different wcome blends, and also wcome to diesel fuel. Hence wcome diesel engines may be recommended as an alternative fuel for diesel engines, where diesel engines may be run with/without any engine modifications. Energy is the key factor meant for the growth of several countries. Petroleum oil plays a major role, because of its intrinsic qualities of extractability, flexibility, transportability, and cost.

The world's petroleum oil resources are reducing day by day. The present consumption rate of petroleum and the continuation of this situation, it will be exhausted at the end of this century and become economically unfeasible to obtain at any time. The petroleum oil remains underground which will explode at an acceptable cost and therefore, production will reach a peck one day and then begin to deteriorate. Such a peak could also be involuntary if supply is unable to stay up with growing demand. If this estimation is taken true, cheap oil would be run out by the next ten years and a majority of oil wells would be dried by the next 30 years. The dominant global source of CO_2 emission resulting from the combustion of

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petroleum fuel poses a major serious environmental problem which results in global warming and greenhouse gases, to control these problems minimize the utilization of petroleum fuels or find out the alternative fuel

Objective - Project Significance or Relevance with biodiesel activities are find the source of alternative fuel for engines; find the best catalyst to extract biodiesel, and find the best biodiesel blend among different blend.

Project Impact or Expected outcome: The biodiesel shows the most significant merits for considering as a substitutive fuel is that, without any engine modifications biodiesel can run the diesel engine as similar diesel fuel. The exhaust emission is reduced because of more oxygen present in biodiesel cause to good or complete combustion characteristics. The good or complete combustion of biodiesel in diesel engines shows an appreciable decrease in unburnt particles and carbon monoxide exhaust emissions compared to petroleum diesel fuel.

The alternative for petroleum fuel, which exhibits following characteristics like

- Non-toxic, renewable
- Easily available,
- Environmentally friendly,
- Cost-effective, and
- Biodegradable.

The revenue may generate by selling produced biodiesel blends. The biodiesel used as fuel for running diesel engines. These engines may be in the transportation vehicles or any stationary diesel engines for power generators.

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Weighing Scale

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Hot pan with Magnetic Stirrer

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Separating Funnel

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Waste Cooking Oil Biodiesel (B100)

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Microsoft Azure Lab

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Dr. Harish H <harish.me27@gmail.com>

Divas Product Grant Program New Assets-Reg.

1 message

Pushpavathi G <president@divasfoundation.in> To: harish sjcit <harish.me27@gmail.com> Cc: principal.rkce@gmail.com Tue, Dec 27, 2022 at 12:38 PM

Hello Dr. Harish H,

Thank you for applying to Divas Product Grant program, we welcome you to the program and have provided you with the following assets. Please let us know if you require any additional assets or need to reconfigure your existing assets, we are happy to coordinate that for you.

Product: Microsoft Azure Active Directory - Fixed Licensed to: R K College of Engineering Reference #: D376643591 Quantity: 20

Customer #: rkce@divasfoundation.onmicrosoft.com Licence Use: Research/Educational Expiry: 12/22/25

The Grant certificate is attached to this message. Your Product Grant will be valid for three years.

You can access and manage your Software Product in your organization's Microsoft Account. To activate the licenses, please click the link below: Take me to my Software Grant(s)

Please feel free to contact us at president@divasfoundation.in with any questions or issues. We'll be glad to help.

We hope that Microsoft Azure software will be useful in your classes!

Kind regards, Mrs. Pushpavathi Gopalaiah Managing Trustee Divas Foundation Mysuru, Karnataka - 571107 Email: president@divasfoundation.in Ph: +91-9182621732



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Microsoft Azure Product Grant

Certificate

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Sponsorship perio	d: Annual		
Valid through:	22 December 2025		
Number of authoriz	ed users: 20		

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Yours faithfully,

Managing Trustee Divas Foundation

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Financial assistance

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Tuesday, April 23, 2024

<u>CIRCULAR</u>

The management, faculty, staff & students congratulate the following students for being awarded cash prize by the "MADDULURI FOUNDATION" for securing highest percentage in the previous semesters for the A.Y 2023-24 and being stood branch toppers.

s.no	NAME OF THE STUDENT	ROLL NO	% MARKS IN THE SEMESTER	YEAR/SEM
01	KAKKIRALA NANGALYA PRAVALLIKA	21MC5A0103	69	4.1
02	KAPPETA SAI KUMARI	21MC5A0212	77	4.1
03	PILLI HEMANTH	21MC5A0326	77	4.1
04	YARRABOTHU KEERTHI	20MC1A0483	80	4.1
05	MANI ARAVIND	23MC1A0577	82	1.1
06	CHEAKURI LAVANYA	23MC1A6109	82	1.1
07	POLEBOYINA GURU ANJALI	23MC1A6146	82	1.1
08	SYED VAJID	23MC1A4453	79	1.1
09	GUNJA UMA VENKATA PRASAD	22615-C-013	85	III SEM
10	KUMMARA GURU HEMALATHA	22615-EE-028	80	III SEM
11	PARUPALLI SHANMUKA SAI	21615-M-039	90	V SEM
12	MEKA REVATHI	22615-EC-030	91	IV SEM
13	ARAVETI GEETHA REDDY	22615-CM-005	87	IV SEM

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PRINCIPAL R K COLLEGE OF ENGINEERING Kethanakonda (V), Ibrahimpatnam (M), Vijayawada, AMARAVATI-521 456



Tuesday, October 29, 2024

CIRCULAR

The management, faculty, staff & students congratulate the following students for being awarded cash prize by the "MADDULURI FOUNDATION" for securing highest percentage in the previous semesters for the A.Y 2023-24 and being stood branch toppers.

s.no	NAME OF THE STUDENT	ROLL NO	% MARKS IN THE SEMESTER	YEAR/SEM
01	gongi prasanthi	23MC5A0103	70.7	3.1
02	MANDELA NAGA PAVANI SAILU	22MC5A0215	75	4.1
03	SUGASI RAMADEVI	22MC5A0227	75	4.1
04	VANKAM VYSHNAVI	22MC5A0228	75	4.1
05	PATHAN BAJI BABA	22MC5A0316	74.5	4.1
06	TUTIPATI ANAND KUMAR	21MC1A0471	80.7	4.1
07	EEVURI VIJAYA LAKSHMI	21MC1A0528	81.7	4.1
08	desaboyina bindu Madhavi	23MC1A6112	80.5	2.1
09	JYOTHI N	23MC1A4427	82.2	2.1

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Kethanakonda (V), Ibrahimpatnam (M), Vijayawada, AMARAVATI-521 456 NARASIMHA

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CSE