

PRASAD V. POTLURI
SIDDHARTHA INSTITUTE OF TECHNOLOGY
KANURU, VIJAYAWADA -7
(AUTONOMOUS)
DEPARTMENT OF FRESHMAN ENGINEERING


CIRCULAR

Date: 27-03-2025.

It is our pleasure to inform the faculty of Mathematics from Freshman Engineering Department is organising a guest lecture on "Differential Equations and Vector Calculus" on 29/03/2025 at 9.30 a.m. by Dr. J.V.Ramana Murthy Josyula, Professor of Mathematics, NIT WARANGAL. Students of the following sections are informed to attend and get benefitted.

Venue: Auditorium

Sections: CSE-I, CSE-II, CSE-IV, CSM


(Dr.M.Srilakshmi)

Prof. & Head-FED

Head
Freshman Engineering Department
PVP Siddhartha Institute of Technology
Kanuru, VIJAYAWADA-520 007.

PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY
DEPARTMENT OF FRESHMAN ENGINEERING
SUMMARY REPORT ON EVENT ORGANIZED

ACADEMIC YEAR : 2024-2025	
Date of event organized	29/3/2025
Name of the event	Mathematics competitions
Title of the event	Guest lecture on "Differential Equations and Vector Calculus"
Resouce person details	Dr. J.V.Ramana Murthy Josyula, Professor of Mathematics, NIT WARANGAL
Brief Report on the Event	<p>A guest lecture on "Differential Equations and Vector Calculus" was organized by FED(Mathematics) department. The event aimed to enhance students' understanding of these fundamental mathematical concepts and their applications in engineering. The session was conducted by Dr. J.V.Ramana Murthy, a renowned expert in this field.</p> <p>The lecture covered the following major topics:</p> <ul style="list-style-type: none"> • Concept of vectors and their operations • Gradient, divergence, and curl • Line, surface, and volume integrals • Applications • Introduction to ordinary differential equations • Solution techniques for first order differential equations • The speaker explained in practical way <p>The guest lecture was providing students in conceptual understanding of the topic</p>
Year/Semester	Ist B.Tech. /II
No. of the participants	150
Consolidated Feedback	Very good
Suggestions if any	Nil
Name of the Co-ordinator	Faculty of Mathematics
Signature of the Co-ordinator	<i>Dr. P. Padma</i>
Signature of the HOD	<i>[Signature]</i>

Freshman Engineering Department
PVP Siddhartha Institute of Technology
Kanuru, VIJAYAWADA-520 007.

Dr. M. Srilakshmi
HOD, FED
PVPSIT
Vijayawada

24/3/2025

J.V.Ramana Murthy Josyula
Professor
NITW

Dear Sir,

Subject: Invitation for Guest Lecture on Differential Equations and Vector Calculus on 29-03-25 – Reg.

I am writing to cordially invite you to be the guest speaker at a lecture we are organizing on **Differential Equations and Vector Calculus**, which is scheduled to take place on 29/3/2025 as part of our course at PVPSIT.


Given your expertise and experience in the field of Mathematics, we believe that your insights into the application and importance of differential equations and vector calculus would be extremely valuable to our students and attendees.

The lecture is planned from 10.00 a.m to 11.30 a.m. , though we are happy to accommodate any adjustments you may require in terms of timing .

We would be truly honored if you could accept our invitation. Kindly let us know your availability at your earliest convenience, and please feel free to contact us if you need any further information or assistance regarding the event.

Thank you for considering this opportunity to share your knowledge with our community. We look forward to your positive response and hope to welcome you as our distinguished guest speaker.

Warm regards,


Head
Dr. M. Srilakshmi Department
HOD, FED
PVPSIT
Vijayawada
Contact No. 9177312931



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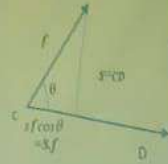
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Scalar and vector products of two vectors

- Let a force F is acting on a particle at C and moves the particle along line CD to a distance s . The amount of force along CD is $F \cos \theta$. Work = force along displacement \times displacement $= F \cos \theta \cdot s = F \cdot \vec{s}$
- Let on a body a force F be acting at P . Then we say that amount of torque τ about $O = F \times$ perpendicular distance from O to force $F = OP \sin \theta$. $\vec{\tau} = \vec{r} \times \vec{F}$
- Due to force two types of motions are generated i) linear motion ii) rotary motion. In the first case we define work as dot product and in second case we define torque as cross product. But both are of same physical dimensions.
- A particle is moving on a circle with angular velocity ω , the



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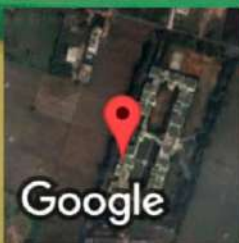
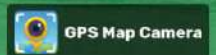
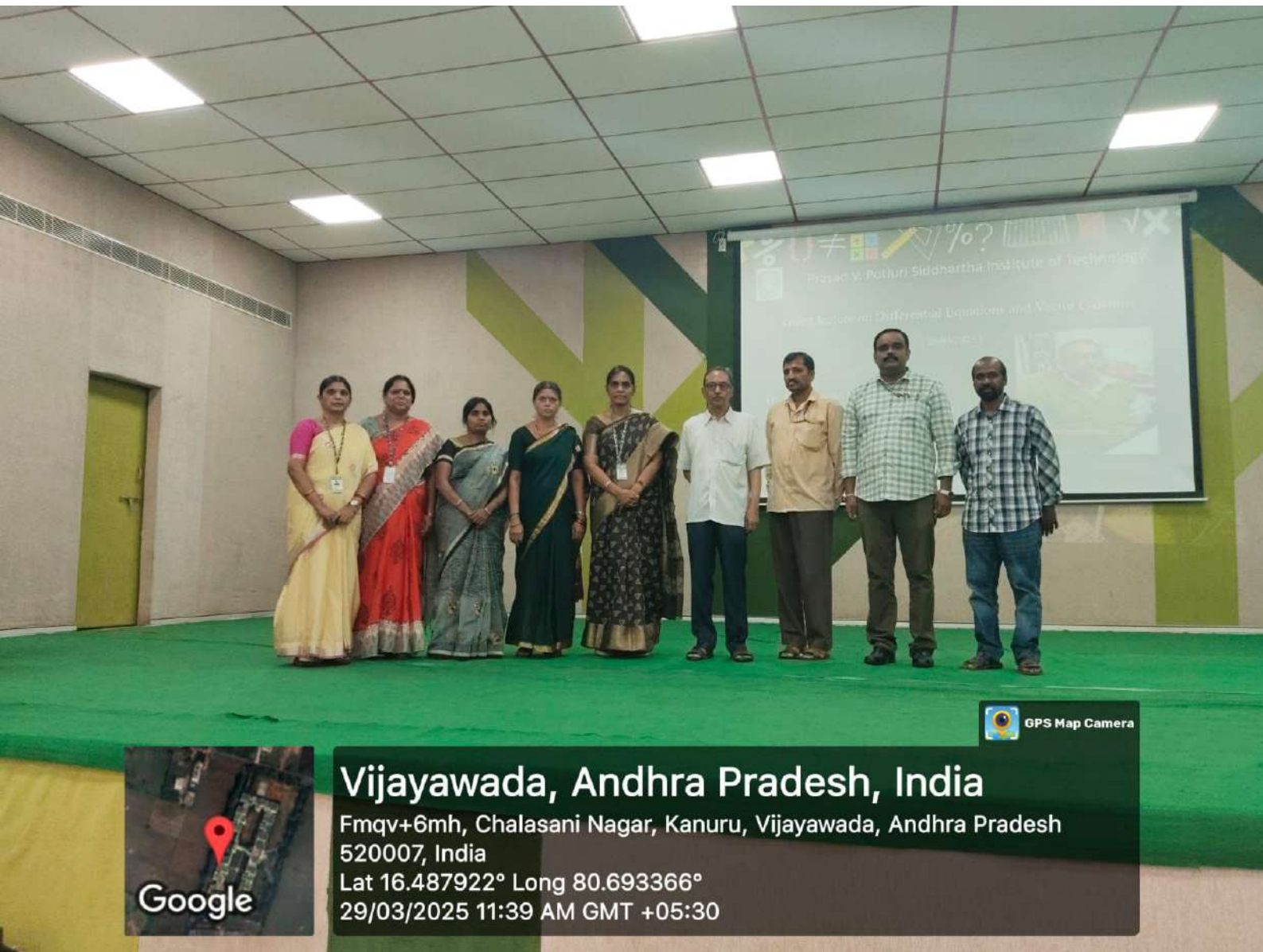
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