Activities under DBT Star College Scheme

No. of hands-on experiments being conducted

Course	Practical	Hours
MAT-142 – Statistical Methods Using R / SPSS / PSPP	1. Importing data from CSV/Excel and data entry. 2. Computing mean, median and mode. 3. Computing range, quartile deviation, mean deviation and standard deviation. 4. Graphical representations and interpretation. 5. Correlation and regression analysis 6. Hypothesis testing using independent and paired t-tests. 7. ANOVA for more than two means. 8. Chi-square test for independence. 9. Kruskal-Wallis test for k independent samples. 10. Questionnaire data analysis.	20
MAT-141 – Numerical Analysis using Python/SageMath	1. Bisection Method. 2. Regula-Falsi Method. 3. Secant Method. 4. Newton-Raphson Method and qth roots. 5. Bairstow's Method. 6. Newton-Gregory Forward Interpolation. 7. Newton-Gregory Backward Interpolation. 8. Central Difference Interpolation. 9. Newton's Divided Difference. 10. Lagrange Interpolation. 11. Numerical Differentiation. 12. Trapezoidal Rule. 13. Simpson's Rules. 14. Straight Line Curve Fitting. 15. Quadratic and Exponential Curve Fitting	30
MAT-241 – Technical Typesetting Using LaTeX	1. Basic document creation and formatting. 2. Customizing margins, spacing, lists. 3. Exploring document classes. 4. Tables and minipage. 5. Accents, symbols and math. 6. Subscripts, fractions, roots. 7. Equation environments. 8. Matrices, series, boxed equations. 9. Theorem environments. 10. Cross referencing and hyperlinks.	60

	11. Graphics insertion. 12. Bibliography and TOC. 13. PSTricks drawings. 14. Beamer presentations. 15. Exam paper preparation.	
MAT-211 – Matrix Algebra	1. Demonstration of matrix operations using SageMath or similar software. 2. Operations include addition, multiplication, inverse, rank, and eigenvalues.	04

Outreach Activities

The Department of Mathematics of P.E.S.'s Ravi S. Naik College of Arts and Science, Farmagudi, Ponda, under the DBT Star College Scheme organised an outreach activity to create awareness about the career opportunities in Mathematics and popularize the subject of Mathematics at P.E.S.'s Higher Secondary School, Ponda on 10th February 2026 from 4.00 pm-5.00 pm.

This activity involved a presentation on "Mathematics: Hidden key to the future" by Ms. Chaitalee Upadhye and Ms. Chaitnya Sawkar, Assistant Professors, Department of Mathematics. 42 students from two divisions of standard 11th participated in the program.

Other Activities under DBT:

Photography Competition

P.E.S.'s Ravi S. Naik College of Arts & Science,
Farmagudi, Ponda-Goa

Affiliated to Goa University , Recognized by UGC under 2f & 12b of UGC Act,
Reaccredited by NAAC with "A-" with CGPA of 3.47, NIRF ranking 2024: ranked in 151-200 rank band

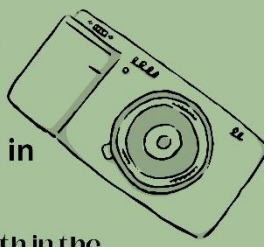
DEPARTMENT OF BIOTECHNOLOGY
Ministry of Science & Technology
Government of India

Department of Mathematics

(under DBT Star College Scheme)

Organises

Photography Competition



Theme: " Mathematics in Nature"

Uncover the beauty of math in the natural world from spiraling petals to symmetrical leaves and patterned shells. Capture how nature speaks in shapes, patterns and perfect forms.

Last date for submission :
31st July 2025

Organizing Committee

Ms. Veda Naik (Event Co-ordinator)	Ms. Sanjana Nigalye (In-Charge, Dept. of Mathematics)	Dr. Kiran Naik (Co-ordinator, DBT Star College Scheme)	Prof. V.J.Pissurlekar (Principal)

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RULES

- Send us a photo that depicts a mathematical shape in your surrounding along with a short caption.
- Photos in vertical (potrait) as well as horizontal (landscape) orientation will be accepted.
- Photographs must be original and unedited.
- Each participant must submit two versions of the same photograph in jpg. format: one geotagged (with location) and one non-geotagged.
- File size must be upto 100 MB.
- Only Individual entry is allowed.
- Judging will be based on relevance to the theme, creativity, aesthetics, caption, and overall visual impact.Decision of the judges will be final & binding.
- All the participants will be given certficates & prizes will be awarded to the winners.
- Interested participants are requested to kindly register and upload the photograph using the google form link given.
  https://forms.gle/jH5rmLMGr47TsF4N9
- Last date to submit the entries is 31st July 2025

For further queries, contact:
Ms. Veda Naik (8459512565)

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The department of mathematics under theDBT star college scheme organised a photography competition on the theme “Mathematics in nature” for the students of the college on 31st July 2025. A total of 13 students participated in the competition

Celebration of National Days

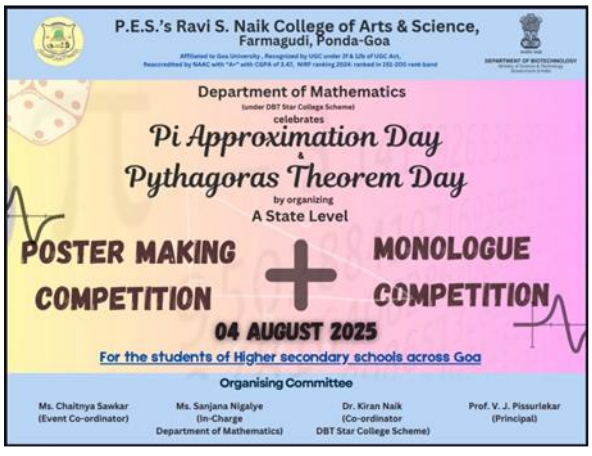
On 11th August 2025, the Department of Mathematics of P.E.S.’s R.S.N. College of Arts & Science, Farmagudi-Ponda, under the DBT Star College Scheme, celebrated Pi Approximation Day and Pythagoras Theorem Day by organizing a State Level Poster making Competition and a Monologue Competition for the students of Higher Secondary Schools across Goa.

Poster Making Competition:

As a part of Celebration of Pi Approximation Day and Pythagoras Theorem Day a State Level Poster Making competition was organized in the Reading Room of the Library at 8.45 am.

The topics for the competition were:

1. Pythagoras: The man behind the Theorem
2. Pythagorean Triplets in real life
3. The Power of Right Triangles

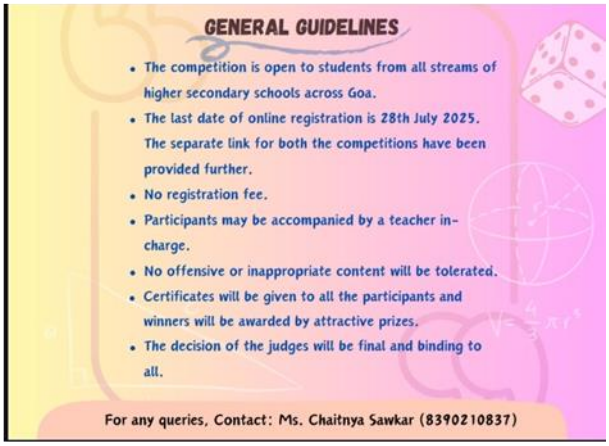


The main objective of this competition was to is to deepen participant’s understanding of mathematical ideas and their impact on science, technology, and society.

In the duration of two hours, participants created posters that highlighted the life of Pythagoras and the significance of

the theorem given by him providing insights into how these Pythagorean triplets have transformed contemporary life. A total 22 Higher Secondary Schools participated in the competition.

Monologue Competition:



As a part of Celebration of Pi Approximation Day and Pythagoras Theorem Day a State Level Monologue competition was organized in the Swami Vivekananda Hall at 10.30 am.

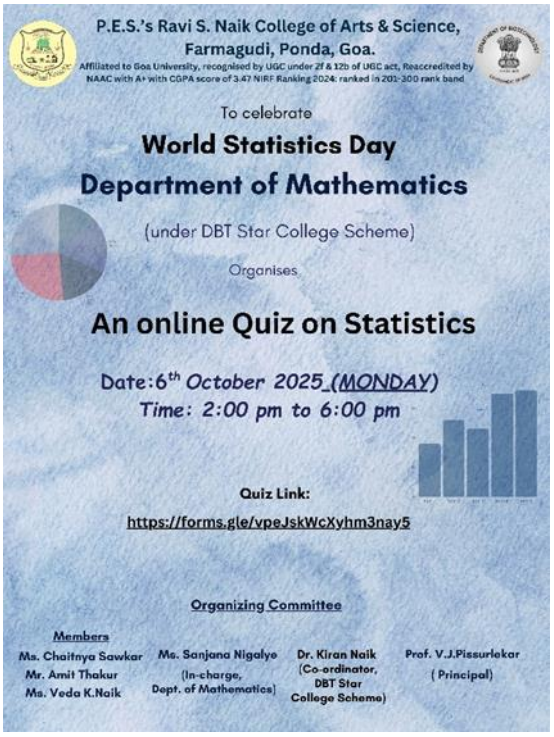
The topics for the competition were:

1. Pi Through Time
2. Pi: Irrational yet Proud
3. I used to fear Math-Then I met Pi

The main objective of this competition was to enhance the creativity and the ability of the students to communicate mathematical ideas in a meaningful and engaging ways.

The participants brought mathematics to life — not with formulas on a board, but through their power of performances. A total 20 Higher Secondary Schools participated in the competition.

The department of Mathematics under the DBT Star College scheme celebrated World Statistics Day by conducting an online quiz on statistics on 6th October 2025 for the students of the college:

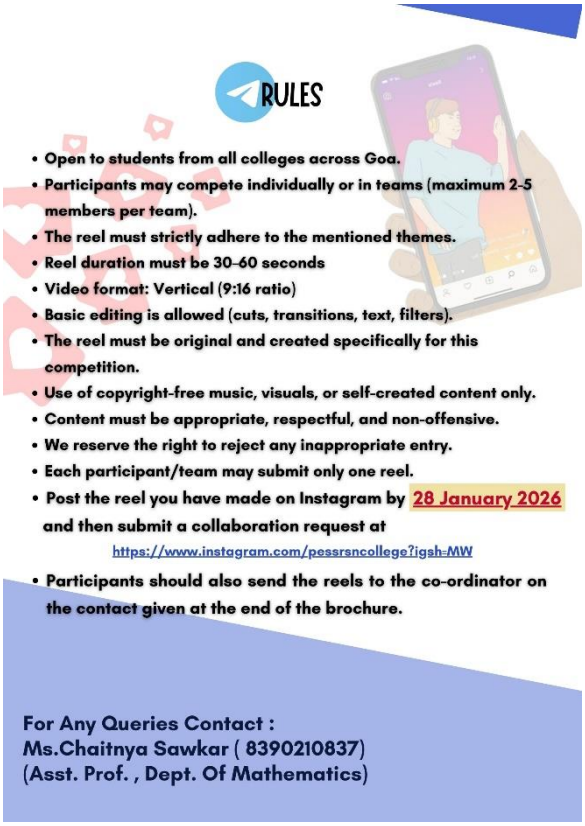


Reel Making Competition

The department of mathematics under the DBT Star College scheme organised an inter-collegiate Reel Making competition on the topic:

1. If mathematics were a person
2. Mathematics in childhood versus Mathematics now

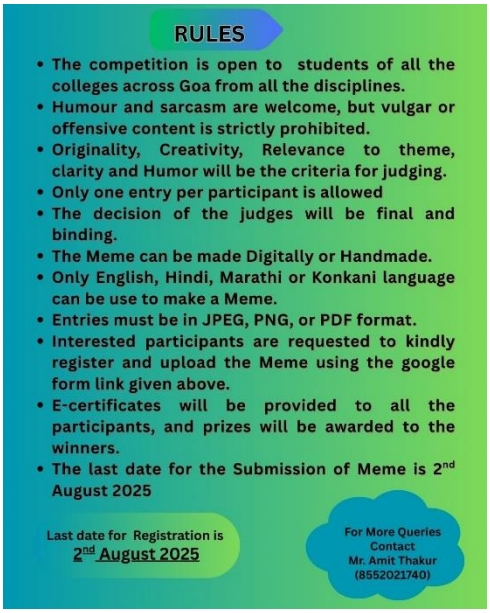
on 28 January 2026.



Meme Making Competition

The department of mathematics under the DBT Star College scheme organised an inter-collegiate Meme Making competition on 2nd August 2025.

PONDA EDUCATION SOCIETY
RAVI S. NAIK COLLEGE OF ARTS AND SCIENCE
FARMAGUDI, PONDA-GOA
Affiliated to Goa University Recognised by UGC under 2f & 12b of UGC Act
NAAC Accredited with A- Grade & CGPA 3.17 for 3rd cycle.
Department of Mathematics
(under DBT Star College Scheme)
Organises
Inter-Collegiate
MEME MAKING COMPETITION
THEME
"Mathematical Memes"
REGISTER
https://forms.gle/3N4sQeASjZNsXjW9A
ORGANISING COMMITTEE
Mr. Amit Thakur (Event Co-ordinator)
Ms. Sanjana Nigalye (In-Charge, Dept. of Mathematics)
Dr. Kiran Naik (Co-ordinator, DBT Star College Scheme)
Prof. V. J. Pissurlekar (Principal)


RULES
• The competition is open to students of all the colleges across Goa from all the disciplines.
• Humour and sarcasm are welcome, but vulgar or offensive content is strictly prohibited.
• Originality, Creativity, Relevance to theme, clarity and Humor will be the criteria for judging.
• Only one entry per participant is allowed
• The decision of the judges will be final and binding.
• The Meme can be made Digitally or Handmade.
• Only English, Hindi, Marathi or Konkani language can be use to make a Meme.
• Entries must be in JPEG, PNG, or PDF format.
• Interested participants are requested to kindly register and upload the Meme using the google form link given above.
• E-certificates will be provided to all the participants, and prizes will be awarded to the winners.
• The last date for the Submission of Meme is 2nd August 2025
Last date for Registration is
2nd August 2025
For More Queries Contact
Mr. Amit Thakur
(8552021740)