

**0D.epartment of Mathematics and Statistics**

**Proforma for submission of Annual Progress Report supported under Star College Scheme**

(Kindly note that the annual report from Point 6 to 10, should not be more than 5 A4 size sheets, with

				<b>Research Supervisor</b>
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font size 12pt and line spacing 1.5)

Name of the College : St Francis College For Women

Name of Coordinator,  
designation, Address, Phone nos.:

Dr. Y.Suryavardhani,  
Assistant professor,  
Department of Mathematics,  
St. Francis College for Women,  
Begumpet, Hyderabad  
9866203452

Ms.G.Priyanka,  
Assistant Professor,  
Department of Statistics  
St. Francis College for Women,  
Begumpet, Hyderabad.  
8523074858

Assessment duration : -01--/04---/2025---- to --31-03/2026---/----- Duration in years : 1

Details of Departments Supported

SI No	Name of Department	Courses (B.Sc./M.Sc./PG Diploma, certificate etc) offered	Regular Faculty members	
			With Ph.D.	Without Ph.D.
			<b>Total =10</b>	
1	Mathematics	BSc	6	0
2	Statistics	BSc	1	3

Number & Date of Advisory committee meeting: 16(Principal , DBT Coordinator , HOD's and Coordinators of each participating departments)

Date 09.07.2025-Orientation for the plan of activities for the current year  
25.03.2026 -Orientation to Budgeting and Annual report preparation

Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words).

- Students developed better analytical and problem-solving skills through real-world exposure and interactive learning activities.

- The initiative improved student engagement, confidence, and application of theoretical knowledge to practical situations.
- Faculty adopted more innovative and experiential teaching methods, enhancing the overall learning environment.
- To provide exposure to advanced scientific research facilities and laboratories in the fields of Mathematics, Physics, Statistics and Chemistry.

### Summary:

Field Trips	2
Guest Lectures & Workshops	2(GL) & 5 (W)
Hands on training for Students and Staff	3

**Field Trips:** Field trips organized by the Mathematics and Statistics department provided students with real-world exposure, helping them connect theoretical concepts to practical applications. They also enhanced students' curiosity, teamwork, and analytical thinking through experiential learning.

### Field Trip to the University Of Hyderabad

**Date:** 8-09-2025

**Time:** 9:00 AM to 3:00 PM

**Brochure:**

The brochure features a background image of the University of Hyderabad entrance. It includes the following text and logos:

- St. Francis College for Women**, Begumpet, Hyderabad-500016 (Autonomous & Affiliated to Osmania University)
- DBT STAR COLLEGE** (Under Strengthening Component)
- DEPARTMENT OF MATHEMATICS**
- Organizes a **Field Trip to University of Hyderabad**, Gachibowli, Hyderabad
- For all **B.Sc. Final Year Physical Science Students**
- Coordinated by:**
  - Dr. Rekha Jaichander**, Head of the Department
  - Dr. K. Lavanya**, Assistant Professor
  - Ms. Lavanya Baradi**, Assistant Professor
- 8<sup>th</sup> September, 2025**
- 9:00 am to 4:00 pm**
- Logos for St. Francis College and the Department of Biotechnology.

The Department of Mathematics organized a field trip to University of Hyderabad, under DBT STAR COLLEGE (Strengthening Component) , on 8<sup>th</sup> September 2025 from 9 am to 3 pm.. Around 28 students from BSc final year physical sciences are part of this field trip.

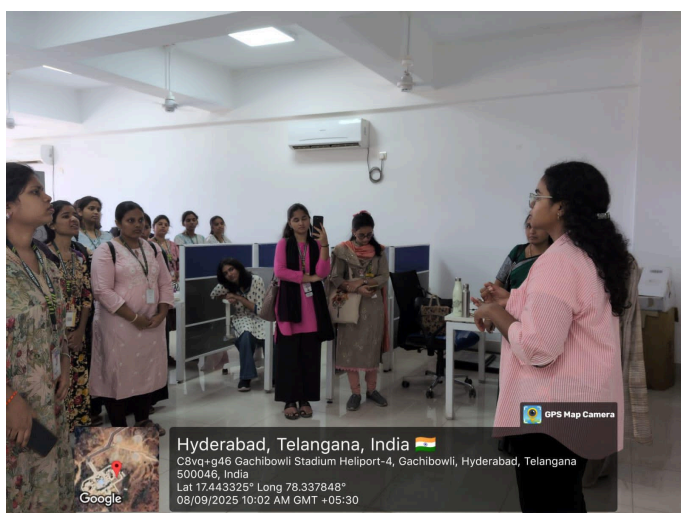
### Objectives:

- To provide exposure to advanced scientific research facilities and laboratories in the fields of Mathematics, Physics, and Chemistry.
- To motivate students to pursue higher education and research opportunities by showcasing academic and career pathways available at HCU.

### 1. Outcomes:

- The visit will motivate students to consider pursuing higher studies (M.Sc., Ph.D.) or careers in research and development.
- Students will understand various academic and professional pathways available in science and research, helping them plan their future career decisions.

### Pictures:

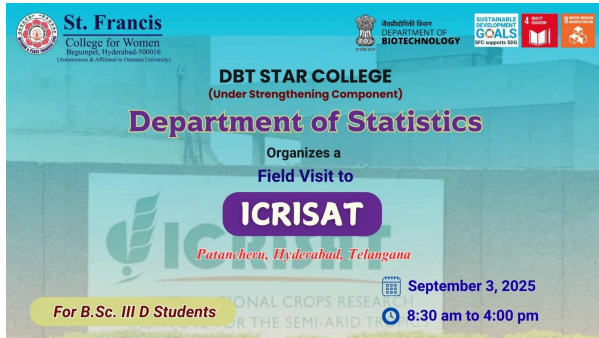


## Report on “FIELD TRIP TO ICRISAT”

Date: 3<sup>rd</sup> September, 2025

Time: 8:30 AM - 4:00 PM

### Brochure:



The Department of Statistics organized Field trip to ICRISAT, Patancheru, Hyderabad under DBT STAR COLLEGE (Strengthening Component) for the BSc.III D students. Around 55 students and 2 faculty members participated.

### Objectives:

1. To provide students with a great learning experience on the application of statistical techniques in various crop research studies.
2. To equip students with the career opportunities and the latest technologies used in the crop research studies.

### Outcomes:

1. The students had a great understanding of real life demonstration of the statistical concepts used in research studies and were very thankful for providing them with this opportunity.
2. The students were also given a deep insight into the career opportunities they can avail as an intern at the esteemed institute.

### Pictures:



**Guest Lectures & Workshops:** To provide students with exposure to recent developments, practical applications, and emerging research areas in the subjects . They also create opportunities for interaction with experts, helping students strengthen analytical skills, career awareness, and academic interest.

**Hands on training for Students and Staff:** Hands-on training programs organized by the Departments of Mathematics and Statistics helped students and staff develop practical skills in problem-solving, data analysis, and the use of mathematical and statistical tools. These programs enhance subject understanding, promote experiential learning, and improve readiness for academic, research, and professional applications.

Any Novel aspect introduced or planning to introduce during the Scheme duration.

- Planning a mini MTTs Programme for staff and students of various colleges.

8. Lessons learnt / difficulties faced/suggestions if any, in implementation of the programme and utilization of DBT grant. (Max 3 points within 300 words).

- Lessons learnt:

The integration of Mathcad into academic activities highlighted the importance of software-based learning in improving analytical skills and promoting interactive teaching methods. It also showed that access to modern computational tools can significantly support research, innovation, and practical application of mathematical concepts.

**Difficulties Faced:** Due to the limited duration of utilization of grant, planning various activities for students and staff felt challenging.

The Departments faced difficulty while organizing field trips as the grants received for travel was not sufficient.

### Key performance indicators

S. No	Indicator	Pre-support	During /After Support	Remarks														
1	No. of students admitted	Total =								Total =								
		M=				F=				M=				F=				
		SC	ST	OBC	G	SC	ST	OBC	G	SC	ST	OBC	G	SC	ST	OBC	G	
		)																
2	No. of students passing out (%) Students Admitted/passing out (pass %)																	
3	Drop-out rates																	
4	No. of students opting for MSc	NIL	NIL															
5	Average marks																	
6	No. of hands-on experiments being Conducted	Count : 6	After Support : 6	With the grants received Departments could successfully complete the Hands on trainings														
7	No. of new experiments Introduced	---																
8	Publications (scopus indexed) /patents, if any.	---																
9	Training received by faculty	Count : 8	After support : 8	Faculty gained awareness of relevant software tools, enabling them to integrate these applications into student assessments effectively.														
10	Exhibitions/seminars /training courses conducted	Organized :-	After support-2 ( Maths & Statistics )	110 students benefited														

11	Books/journals subscribed from grants	Count : 43+30	After support	
12	Outreach activities (Popular lectures)	Count: 1(Mathematics)	After support	250 students
13	Colleges mentored to apply for DBT Star College grants			
14	Invited lectures	—	After support	

- Proofs ( S.No. 6-14 not more than 5 pages, 1.5 line spacing 11 times roman font size) to be provided duly attested by Principal and Coordinator.

## 6. No. of hands-on experiments being Conducted

### 1. Hands-on Training on “Computational Thinking with Mathematica

Date: 30-01-2026

Time: 10:30 AM to 3:30 PM

Brochure:

The brochure features the logos of St. Francis College for Women and the Department of Biotechnology. It prominently displays the text: 'DBT STAR COLLEGE (Under Strengthening Component) DEPARTMENT OF MATHEMATICS Organizes a Hands on workshop on "Computational Thinking with Mathematica" For B.Sc. Final Year Physical Science Students'. At the bottom, it specifies the date '30<sup>th</sup> January, 2026', time '10:00 am to 3:30 pm', and location 'Lab 7'.

The Department of Mathematics organized a Workshop ( Hands on Training) under DBT STAR titled “Computational Thinking with Mathematica” for B.Sc Physical Science final year students on 30th January, 2026. in Lab 7 from 10:30 A.M to 03:30 PM.

The resource person for the session was Prof. G.Srinivas,Department of Mathematics,Geetanjali College of Engineering Science & Technology,Keesara.

### The objective for the session was:

- The workshop was designed for the students to solve mathematical problems numerically, involving equations, systems of equations, matrices, and eigenvalue problems using Mathematica.

## Outcomes:

- Develop a clear understanding of core computational thinking concepts such as decomposition, abstraction, pattern recognition, and algorithmic thinking.
- Translate mathematical and real-world problems into computational models using the Wolfram Language.

## Pictures:



## 2. Hands-on Training on “Exploring Mathematics with Python”

Date: 2-02-2026

Time: 10:40 AM to 12:40 PM

Brochure:

The Department of Mathematics organized a Workshop under DBT STAR ( Hands on Training) titled “Exploring Mathematics with Python” for B.Sc II H ,Physical Science second year students on 2nd February, 2026. in Lab 7 from 10:40 A.M to 12:40 PM.

The resource person for the session was Prof. A.Satyanarayana Reddy,Department of Mathematics,Shiv Nadar University,Delhi.

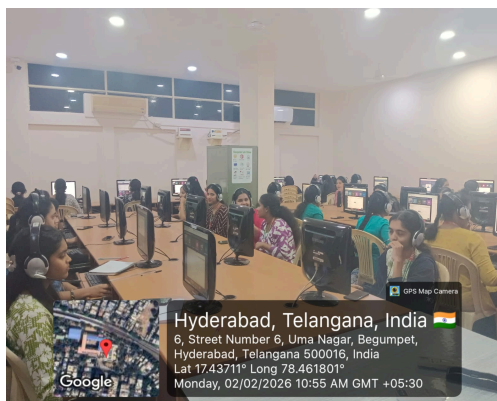
### The objective for the session was:

- The workshop was designed for the students to introduce Python as an effective tool for learning and applying mathematics.

## Outcomes:

- Students can visualize complex functions,dissect concepts in Linear Algebra,patterns in number theory,simulate probabilistic events and even test numerical methods from Calculus.

## Pictures:



### 3.Hands-on Training on “Applications of ODE using Octave Software.”

Date: 6-02-2026

Time: 9:30 AM to 3:30 PM

Brochure:

The Department of Mathematics organized a Workshop (Hands-on Training) under DBT STAR (Strengthening component) titled “Applications of ODE using Octave Software” for B.Sc II D Physical Science students on 6th February 2026. In Lab 2 from 9:30 A.M to 12:40 PM and BSc II B Physical Science students from 1:10 PM to 3:30 PM.

The resource person for the session was Prof.Hari Ponnamma Rani, Department of Mathematics, NIT Warangal.

#### The objective for the session was:

- To familiarize students with GNU Octave as a computational tool for solving ODEs.
- To promote **hands-on learning** through simulations and graphical visualization of ODE solutions.

#### Outcomes:

- Visualize solutions using Octave plotting tools for better interpretation.
- Formulate mathematical models using ordinary differential equations.

## Pictures:



## 4. Inter College Hands-on Training on “Mathcad Software”

Date: 13-03-2026

Time: 8:30 AM to 11:00 AM

Brochure:


**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

जैवप्रौद्योगिकी विभाग  
DEPARTMENT OF  
BIOTECHNOLOGY

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**Department of Mathematics**  
organises a  
Inter College Hands on training on  
**Mathcad Software**

**Resource Person**

  
**Dr. Surjeet**  
Assistant Professor,  
Sreenidhi University, Ghatkesar

**For Students & Faculty**

**13<sup>th</sup> March, 2026**  
**8:30 am to 10:30 am**  
**UG Lab 10**

The Department of Mathematics organized an inter college workshop ( Hands on Training) titled “Matlab Software” under DBT STAR for faculty and students from Reddy Women’s College and Little Flower Degree college and dept of Mathematics on 13th March, 2026. in Lab 10 from 8:30 AM to 11:00 AM.

first-year students on 5th February 2026. In Lab 2 from 1:10 P.M to 03:30 PM.

The resource person for the session was Dr.A.Surjeet, Assistant Professor, Department of Mathematics, Sreenidhi University, Ghatkesar..

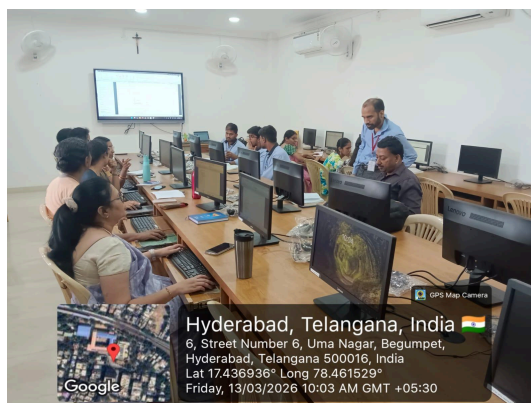
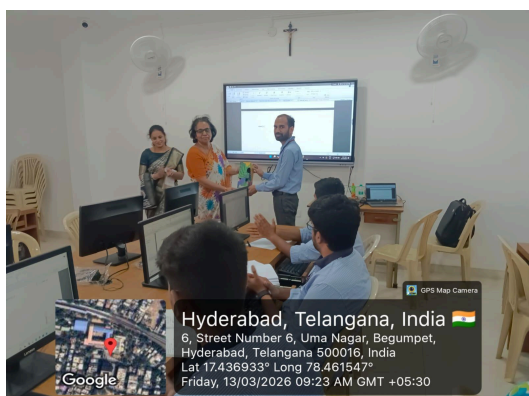
### The objective for the session was:

1. The workshop was designed for the students to gain hands-on experience using Matlab to Plot and compare analytical and numerical solutions of differential equations using MATLAB graphics tools.

### Outcomes:

1. Students developed hands-on proficiency in using MATLAB for solving, plotting, and visualizing differential equations.

### Pictures:



### Report on WORKSHOP titled “APPLIED BUSINESS ANALYTICS WITH POWER BI: FROM DATA TO DASHBOARD”

Date: 15<sup>th</sup> and 16<sup>th</sup> December, 2025

Time: 9:30 AM - 3:30 PM

Brochure:

**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

Resource Person

**Mr. Subash Tej**  
Assistant Professor,  
Siva Sivani institute of Management

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**Department of Statistics**

Organizes  
Two Days Workshop on

**APPLIED BUSINESS ANALYTICS WITH  
POWER BI : FROM DATA TO DASHBOARD**

**15<sup>th</sup> & 16<sup>th</sup> December, 2025**

**9:30 am - 3:30 pm**

**Gerosa Hall**

**Audience : For B.Sc. III ( D & H) students**

The Department of Statistics organized a workshop on “APPLIED BUSINESS ANALYTICS WITH POWER BI: FROM DATA TO DASHBOARD” under DBT STAR COLLEGE (Strengthening Component) for the BSc.III (D & H) students. Around 95 students and 3 faculty members participated.

## Objectives:

1. To enhance students skills in data visualization techniques using Power BI.
2. To provide hands-on training in creating interactive dashboards and reports.
3. To help students understand the importance of data interpretation for informed decision making.

## Outcomes:

1. The students were imparted with the basics of Power BI with the help of a case study and also were given hands on training of developing a Dashboard.
2. Students gained deeper insights into data visualization and business intelligence.

Hands-on sessions enabled practical understanding and application of Power BI tools.

## Pictures:



## Report on Workshop: “Data Analytics using Python”

Date: 6<sup>th</sup> March, 2026

Time: 9:30AM- 3:30PM

Brochure:

**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

Resource Person

**Dr. K.S. Harish**  
Professor  
Siva Sivani Institute of Management

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**Department of Statistics**

Organizes a  
Hands-on session on

**Data Analytics using Python**

6<sup>th</sup> March, 2026

9:30 am to 3:30 pm

Lab 10

For B.Sc IIID students

The Department of Statistics organized a Hands-on session titled “Data Analytics using Python”, under DBT STAR COLLEGE (Strengthening Component) for the BSc. IIID students. Around 60 students and 3 faculty members participated.

### Objectives:

1. To provide practical experience in performing data analysis using Python and help them to develop hands-on skills in Data Analytics techniques such as data cleaning, visualization, and interpretation.
2. To enable students to apply theoretical knowledge to real-world datasets and to build confidence in using programming tools for solving data-related problems.

### Outcomes:

1. Students understood how to perform descriptive statistics on real datasets and developed skills to create data visualizations (bar charts, histograms, line plots, scatter plots) for better insight.
2. Students learned how to import, clean, and organize datasets for analysis and gained experience in creating visual representations such as charts and graphs for better understanding of data.
3. Students gained an understanding of real-world applications of data analytics in industries like finance, healthcare, marketing, and technology.

## Pictures:



## 9. Training received by faculty :

Inter College Hands-on Training on “Mathcad Software”

Date: 13-03-2026

Time: 8:30 AM to 11:00 AM

Brochure:


**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

भारतीय विज्ञान संस्थान  
DEPARTMENT OF  
BIOTECHNOLOGY

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**Department of Mathematics**  
organises a  
Inter College Hands on training on  
**Mathcad Software**

**Resource Person**

  
**Dr. Surjeet**  
Assistant Professor,  
Sreenidhi University, Ghatkesar

**For Students & Faculty**

**13<sup>th</sup> March, 2026**  
**8:30 am to 10:30 am**  
**UG Lab 10**

The Department of Mathematics organized an inter college workshop ( Hands on Training) titled “Matlab Software” under DBT STAR for faculty and students from Reddy Women’s College and Little Flower Degree college and dept of Mathematics on 13th March, 2026. in Lab 10 from 8:30 AM to 11:00 AM.

first-year students on 5th February 2026. In Lab 2 from 1:10 P.M to 03:30 PM.

The resource person for the session was Dr.A.Surjeet, Assistant Professor, Department of Mathematics, Sreenidhi University, Ghatkesar..

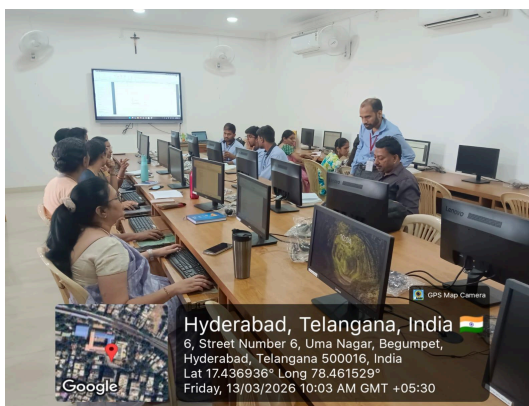
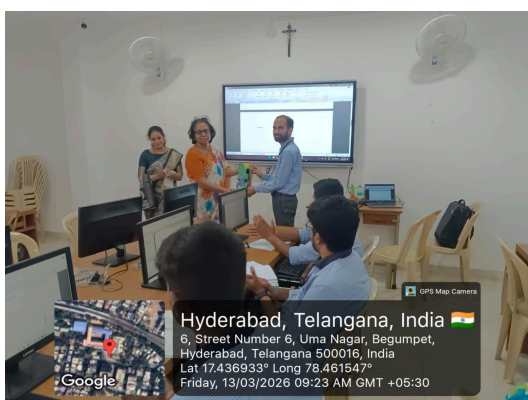
**The objective for the session was:**

- 1. The workshop was designed for the students to gain hands-on experience using Matlab to Plot and compare analytical and numerical solutions of differential equations using MATLAB graphics tools.

**Outcomes:**

- 1. Students developed hands-on proficiency in using MATLAB for solving, plotting, and visualizing differential equations.

**Pictures:**



**Report on One -Day Faculty Development Program Session I**

**Date: 12<sup>th</sup> February, 2026**

**Time: 9:30 AM - 3:30 PM**

**Brochure:**

**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

**DBT STAR COLLEGE**  
(Under Strengthening Component)  
**Department of Statistics**  
Organizes  
Faculty Development Program on  
"POWER BI ESSENTIALS : VISUALIZING,  
ANALYZING AND REPORTING DATA"

**Resource Person**  
**Mr. Subash Tej**  
Assistant Professor,  
Siva Sivani Institute of Management

**12<sup>th</sup> February, 2026**  
**9:30 am - 3:30 pm**  
**UG Computer Lab**

The Department of Statistics had organized a Faculty Development Program on “ Power BI Essentials: Visualizing, Analysing and Reporting Data” on 12 February 2026. The speaker for the session was Mr.

Subash Tej, Assistant Professor, Siva Sivani Institute of Management. The talk was attended by faculty from all the streams in UG Computer Lab from 9:30AM to 3:30 PM.

**Objectives:**

- To provide practical insights and hands on training on using Power BI for Visualizing and Reporting data.

**Outcomes:**

- The faculty were given hands on training on data transforming, creating a Dashboard with the help of a case study. The interactive and effective session enabled the faculty to interpret trends, patterns, and insights from datasets.

**Pictures:**



Report on One -Day Faculty Development Program Session II

Date: 12<sup>th</sup> MARCH, 2026

Time: 9:30 AM - 3:30 PM

Brochure:



The Department of Statistics had organized a Faculty Development Program on “ Power BI Essentials: Visualizing, Analysing and Reporting Data session - II” on 12 March 2026. The speaker for the session was Mr. Subash Tej, Assistant Professor, Siva Sivani Institute of Management. The talk was attended by faculty from all the streams in UG Computer Lab from 9:30AM to 3:30 PM.

Objectives:

- To provide practical insights and hands on training on using Power BI for Visualizing and Reporting data.

Outcomes:

- The faculty were given hands on training on data transforming, creating a Dashboard with the help of a case study. The interactive and effective session enabled the faculty to interpret trends, patterns, and insights from datasets.

Pictures:



12. Outreach activities (Popular lectures)

Popular Lecture on “Career Guidance”

Date: 4-02-2026

Time: 1:10 PM to 3:30 PM

Brochure:

The brochure features a light blue background with various icons related to career and education. On the left, there is a circular portrait of Mr. Faizul Hassan. The text is arranged in a clear, organized manner, starting with the college name and department, followed by the speaker's name and title, and then the date, time, and location of the lecture. The target audience is specified at the bottom.

**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**DEPARTMENT OF MATHEMATICS**  
organizes  
a Guest Lecture on  
**Career Guidance**

**Resource Person**

**Mr. Faizul Hassan**  
Senior Manager@ IDP India  
HEA specialist with 15 years of  
experience in the domain  
HEA- Higher Education Abroad

**4<sup>th</sup> February, 2026**  
1:10 pm to 3:10 pm

**Gerosa Hall**

**For B.Sc. III (B & D) Students**

The Department of Mathematics organized a Guest lecture on “Career Guidance” under the DBT STAR COLLEGE (Strengthening Component) for B.Sc III B, D & E, Physical Science final-year students on 4<sup>th</sup> February, 2026, in Gerosa Hall, from 1:10 P.M to 3:30 PM.

The resource person for the session was Mr. Faizul Hassan, Senior Manager @ IDP India.

**The objective for the session was:**

- The session spotlighted dynamic career paths for mathematics graduates—data science, analytics, actuarial science, finance, and research—across India and abroad.

**Outcomes session:**

- Students were encouraged to develop strong analytical and programming skills, actively pursue internships for real-world experience, seek mentorship for guidance, and continuously refine their competencies for long-term growth

**Pictures:**



## Report on Guest Lecture: “Statistics in Data Science and Artificial Intelligence”

Date: 5<sup>th</sup> March, 2026

Time: 10:40AM -11:40AM

Brochure:

**St. Francis**  
College for Women  
Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)

**DBT STAR COLLEGE**  
(Under Strengthening Component)

**DEPARTMENT OF STATISTICS**  
organizes  
**GUEST LECTURE ON**  
**Statistics in Data Sciences and Artificial Intelligence**

**Dr. M. Raghunath Acharya**  
Director, Data Kiazan Solutions

**5<sup>th</sup> March, 2026**  
10:40 am to 11:40 am

**MBA Seminar Hall**

**Audience : B.Sc ID & I-MES students**

The Department of Statistics organized a guest lecture on “Statistics in Data Science and Artificial Intelligence”, under DBT STAR COLLEGE (Strengthening Component) for the BSc.(D, MES, S.E) first year students. Around 130 students and 3 faculty members participated.

### Objectives:

1. To help students understand the career opportunities in Data Science and Artificial Intelligence.
2. To help students understand industry expectations and prepare for future careers in data-driven technologies.

### Outcomes:

1. Students gain awareness of career opportunities in Data Science and Artificial Intelligence and understand the importance of Statistics in building data-driven careers.
2. Students become familiar with essential tools and programming languages such as Python and R and gain knowledge on how to develop analytical and problem-solving skills required for data science roles.

**Pictures:**

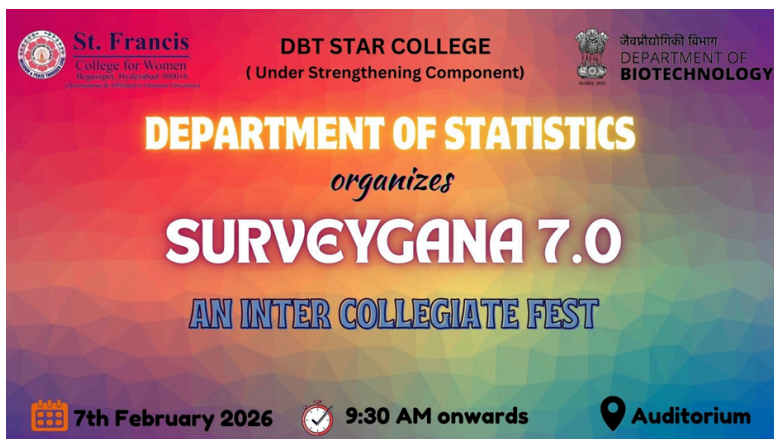


**Report on “ SURVEYGANA 7.0”**

**Date: 7<sup>th</sup> February, 2026**

**Time: 9:30 AM - 3:30 PM**

**Brochure:**



The Department of Statistics organized “SURVEYGANA 7.0”, an inter collegiate fest under DBT STAR COLLEGE

(Strengthening Component) for the BSc. I, II and III years (D, H & MES). Around 350 students and 4 faculty members participated.

**Objectives:**

1. To encourage student interest in statistics through interactive and engaging activities.
2. To provide a platform for students to showcase their analytical, problem-solving, and data interpretation skills.
3. To enhance teamwork, critical thinking, and logical reasoning among students thereby bridging the gap between theoretical knowledge and practical use of statistics

**Outcomes:**

- The fest stood as a great learning platform to the participants as well as the organizers.
- The fest enhanced collaboration, communication, and presentation skills among the participants which increased confidence in using statistical methods and handling softwares.
- Students gained a better understanding of how statistics is applied in real-life situations.

**Pictures:**





### Self evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Mathematics and Statistics	Workshops organized Training sessions conducted Guest lecturers organized Field trips Purchased Mathcad software	100	12/12


\* For quantitative analysis you may fix five objective (max) each having 2 marks and accordingly can calculate the matrix.

**ZBSA Status: (Mark Check Box):**

**Remarks if, any:**

**Sanctioned Budget details:**

Head	Total Released Budget from DBT	Total Expenditure	(Rs. in Lakhs)	
			Balance as on	Remarks if any
Grants for creation of capital assets (Non- recurring)	3,14,700	177700	-	-
Grants-in-aid General (Recurring)	1,50,000/-	1,47760	2240	

Course Coordinator

Head of the Institution

**(With Seal)**

**(With Seal)**