

# P. G. DEPARTMENT OF MATHEMATICS

Karim City College, Jamshedpur

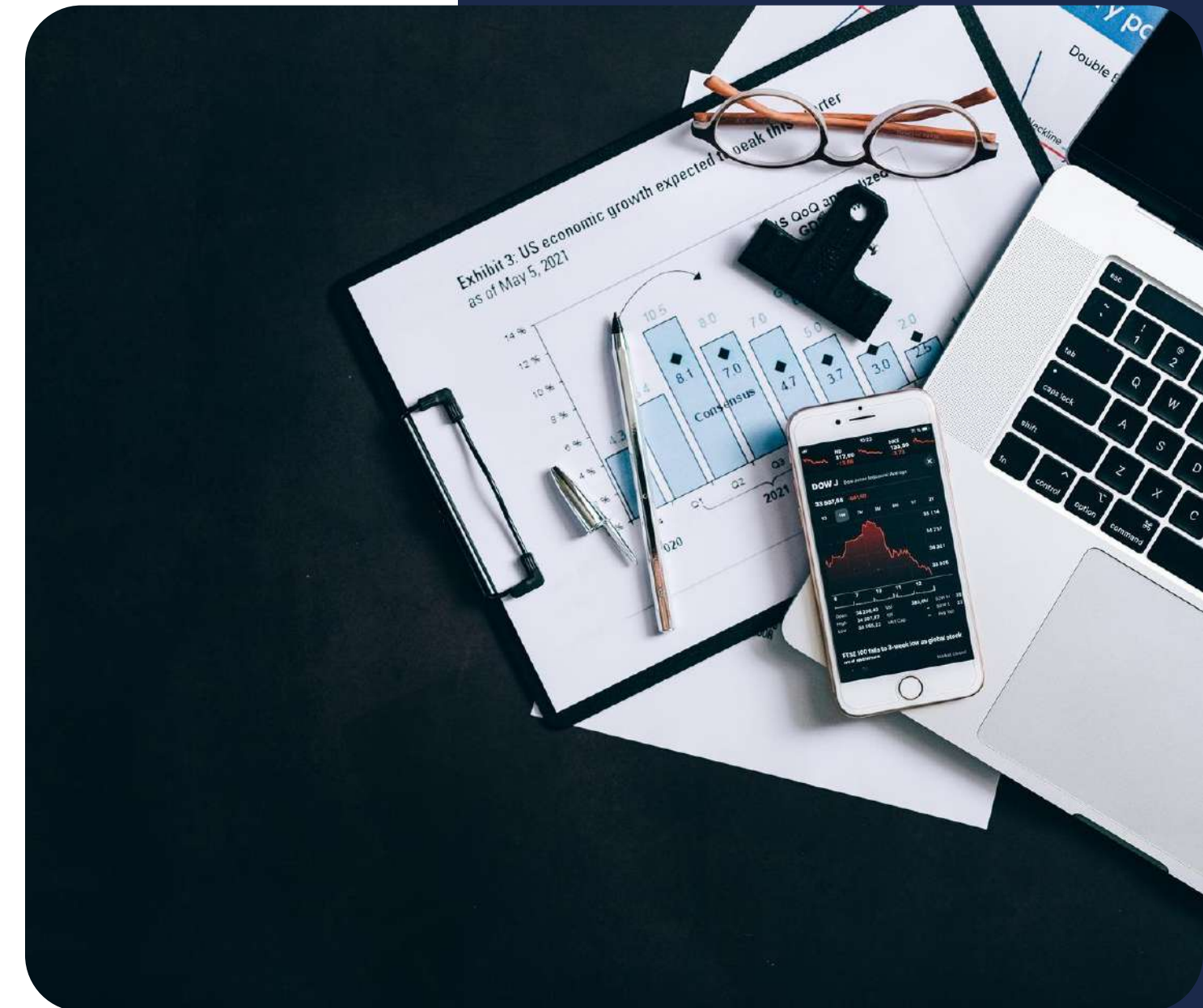
Welcomes NAAC Peer Team





# OVERVIEW

- Introduction
- Vision & Mission
- About the Department
- Teachers Profile
- Outcomes
- Results
- Placements
- Progression to Higher Education
- Slow & Advanced Learners
- Mentoring
- Use of ICT Tools
- Departmental Library & Math-Lab
- Activities of the Department
- Students Achievements
- Best Practices
- SWOC Analysis
- Future Plans



# INTRODUCTION

- PG Department of Mathematics is a premier department of our college.
- Aim of the department is to serve the society in the field of Mathematics





# VISION

- The Department is to be recognized for its excellence in teaching and research.
- The Department is to be recognized in providing excellent Mathematical skills to its UG & PG students.



# MISSION

- To develop critical thinking and problem-solving skills, content knowledge, and the ability to communicate ideas effectively.
- To attend the mathematical needs of the institute and the community.

# ABOUT THE DEPARTMENT



## THE CHRONOLOGY



- ✓ 01  
Year of Establishment  
1963
- ✓ 02  
Started Honours in Mathematics  
1978
- ✓ 03  
Establishment of Math-Lab  
2011
- ✓ 04  
Started P. G. in Mathematics  
2013







## ABOUT THE DEPARTMENT



PROGRAMMES OFFERED

B. Sc. & M. Sc.



STUDENTS STRENGTH

UG & PG 501



TEACHERS STRENGTH

05





# Current Faculty Members



**Dr. Md Moiz Ashraf**  
Assistant Professor  
Head of the Department



**Dr. P. C. Banerjee**  
Assistant Professor



**Dr. Shahid Ahmad Hashmi**  
Assistant Professor



**Dr. B. P. Singh**  
Assistant Professor



**Mrs. Yashmin Banu**  
Assistant Professor

# Faculty Profile

In a nutshell



Name	Qualification	Designation	Specialization	Date of Joining
Dr. Md. Moiz Ashraf	M. Sc. Ph.D.	Assistant Professor	O.R., Fluid Dynamics Topology & Bitopology	2/12/2002
Dr. P. C. Banerjee	M. Sc. Ph. D.	Assistant Professor	O.R., Integral Transforms	16/11/2002
Dr. Shahid Ahmad Hashmi	M. Sc. Ph. D.	Assistant Professor	Differential Geometry & Functional Analysis	01/03/2003
Dr. B. P. Singh	M. Sc. Ph. D.	Assistant Professor	Integral Transform	11/09/2006
Mrs. Yasmin Bano	M. Sc. MCA. M. Tech.(CS)	Assistant Professor	Matrix Trans. in Sequence spaces & Wireless Sensor Network	10/12/2015





# Teachers' Profile

**Dr. Md Moiz Ashraf** (Assistant Professor & Head)

## Academics Achievements

Number of Research Papers published:	08
Number of Papers presented in seminars :	03
Number of Orientation Courses attended:	01
Number of Refresher Courses attended:	03
Number of Workshop/training programs:	05
Number of FDP/Short term Courses attended:	04



# Teachers' Profile

**Dr. Md Moiz Ashraf** (Assistant Professor & Head)

**Academic/Administrative responsibility**

- DRC Member in Kolhan University, Chaibasa: 2017 to 2019
- BOS Member in Kolhan University, Chaibasa: 2012, 2014, 2020, 2022
- BOS member in Jamshedpur Women's University, Jsr: 2020
- BOS member in Netaji Subhash University, Jsr: 2024
- External Expert in National Conference NSU: 2023
- Course Coordinator 8 Day training program by UGC MMTTC AMU: 2024
- Library In-charge
- Nodal Officer NIRF
- Assistant Coordinator IQAC
- Data Approver RUSA
- Coordinator Web-Site Updation Committee
- Member Placement Cell
- Member Discipline Committee
- Member Executive Committee SPArC





# Teachers' Profile

**Dr. P. C. Banerjee** (Assistant Professor)

## Academics Achievements

Number of Research Papers published:	03
Number of Papers presented in seminars :	03
Number of Orientation Courses attended:	01
Number of Refresher Courses attended:	01
Number of Workshop/training programs:	04
Number of FDP/Short term Courses attended:	03

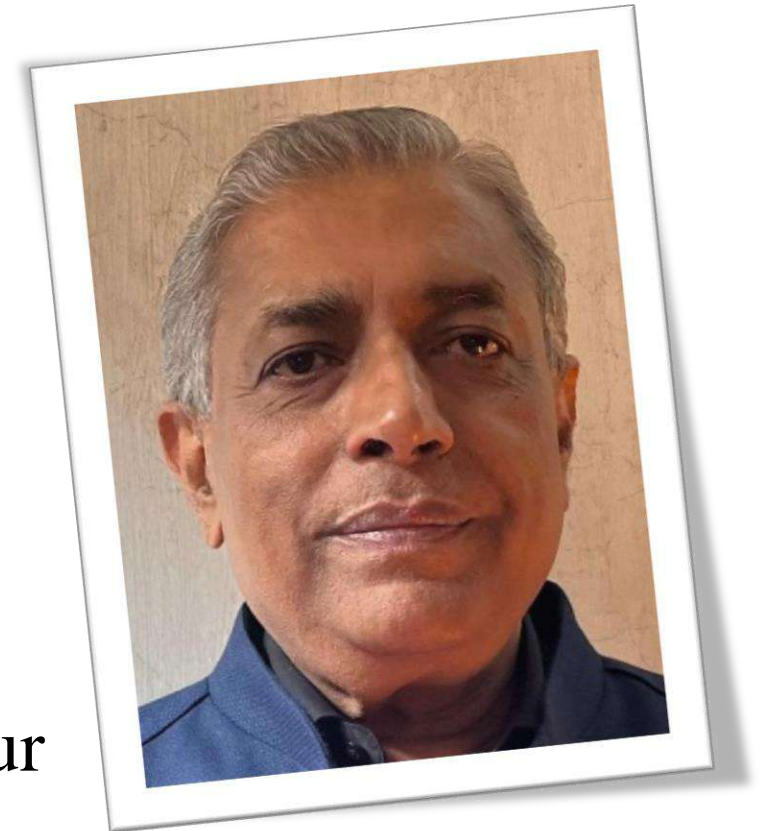


# Teachers' Profile

**Dr. P. C. Banerjee** (Assistant Professor)

## Other Academic/Administrative responsibility

- BOS Member in Kolhan University, Chaibasa: 2014, 2022
- BOS member in Netaji Subhash University, Jsr: 2019
- Resource person in Orientation Program by NTM(CIIL)
- Life time member of Indian Society of Theoretical & Applied Mechanics IIT Kharagpur





# Teachers' Profile

**Dr. Shahid Ahmad Hashmi (Assistant Professor)**

## **Academics Achievements**

Number of Research Papers published:	09
Number of Papers presented in seminars :	02
Number of Orientation Courses attended:	01
Number of Refresher Courses attended:	02
Number of workshops attended:	02
Number of FDP/Short term Courses attended:	04

## **Other Academic/Administrative responsibility**

- Common Room In-charge



# Teachers' Profile

**Dr. B. P. Singh** (Assistant Professor)

**Academics Achievements**

Number of Research Papers published:

Number of Papers presented in seminars :



**Mrs. Yashmin Banu** (Assistant professor)

**ACADEMICS ACHIEVEMENTS**

Number of Research Papers published: 01

Number of Papers presented in seminars : 03

Number of workshops attended: 01

Number of FDP/Short term Courses attended: 01







## PREVIOUS FACULTY MEMBERS



Mr Bashiruddin (Reader)

Date of Joining: 25/07/1966

Date of Retirement: 31/12/2002



Dr. Ziauddin Khan Warsi (Assistant Professor)

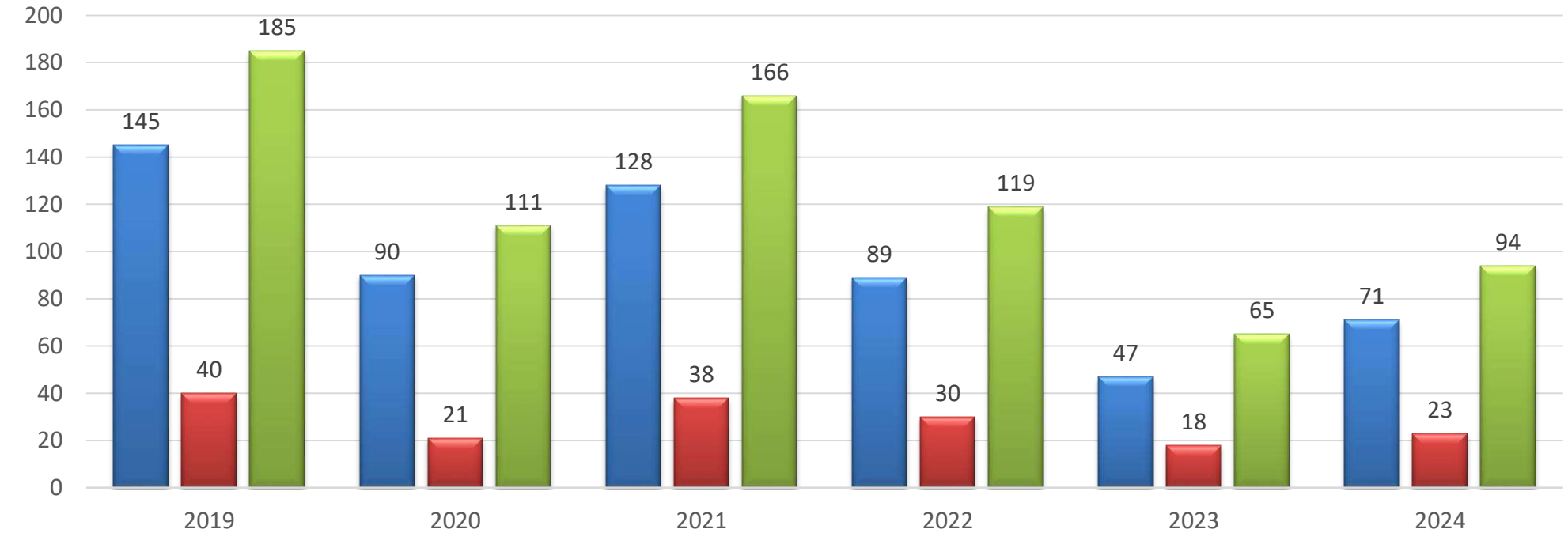
Date of Joining 16/07/1987

Resigned on: 16/04/1998



# Students Admitted (UG)

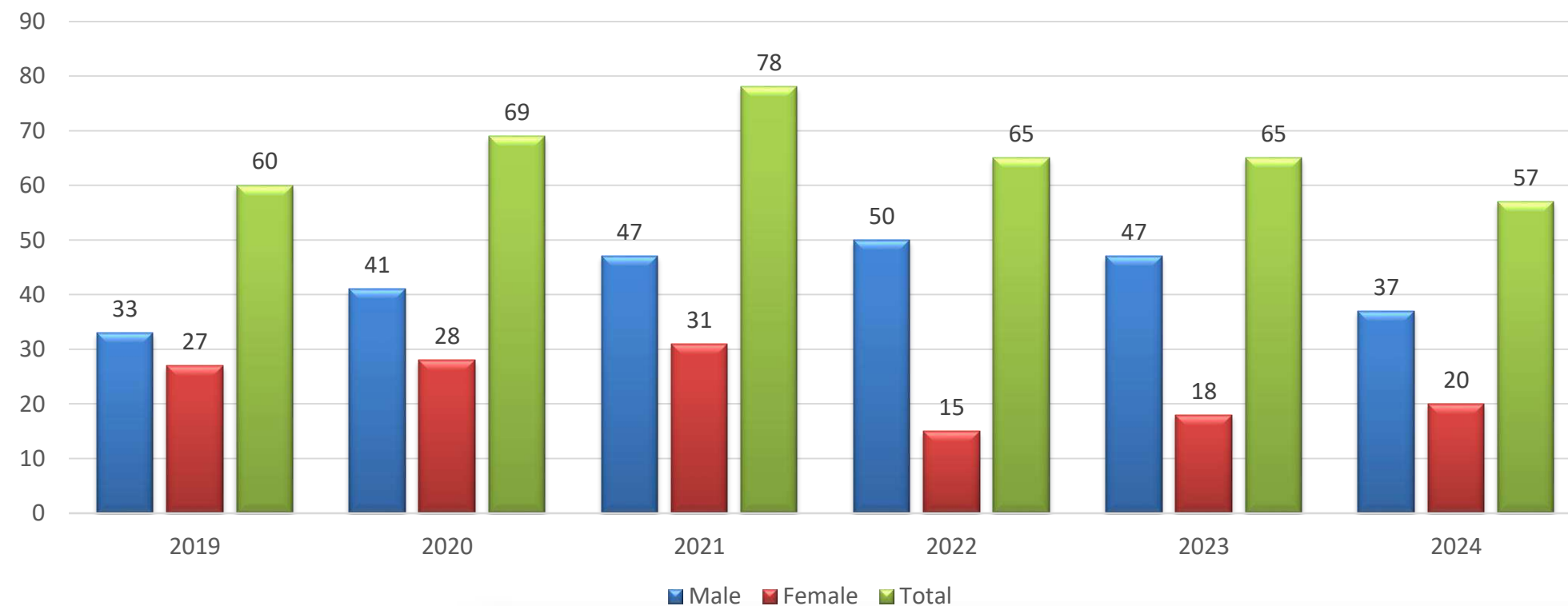
Year	2019	2020	2021	2022	2023	2024
Male	145	90	128	89	47	71
Female	40	21	38	30	18	23
Total	185	111	166	119	65	94





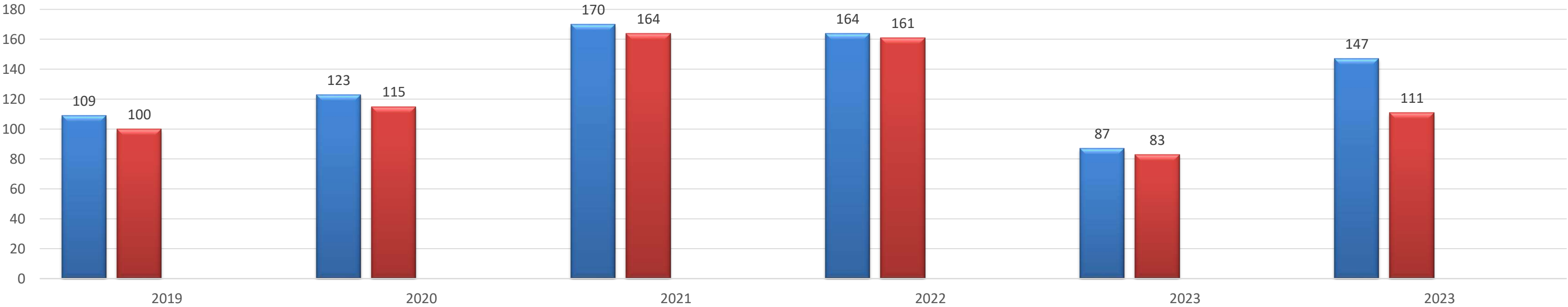
# Students Admitted (PG)

Year	2019	2020	2021	2022	2023	2024
Male	33	41	47	58	50	37
Female	27	28	31	26	15	20
Total	60	69	78	84	65	57



# Results (UG)

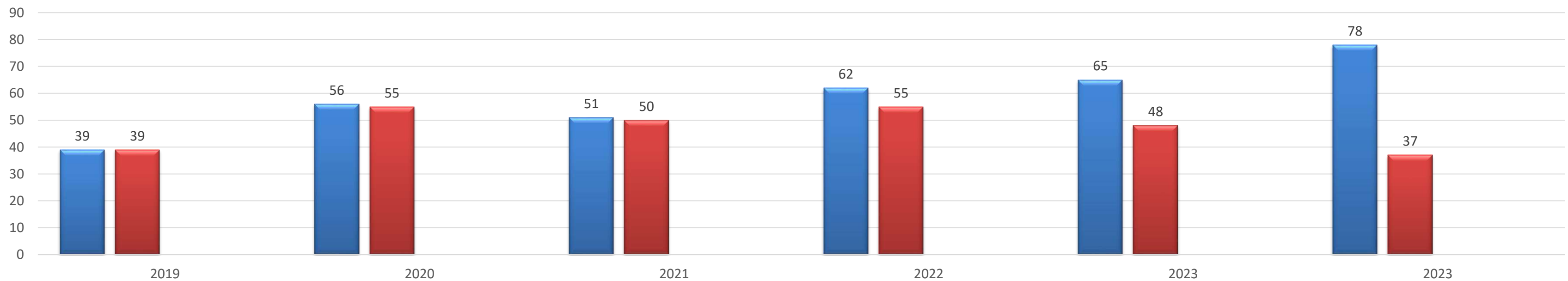
Year	2019	2020	2021	2022	2023	2024
Appeared	109	123	170	168	87	147
Passed	100	115	164	161	83	111
First Class	65	97	155	150	64	68
Second Class	35	18	9	11	3	39





# Results (PG)

Year	2019	2020	2021	2022	2023	2024
Appeared	39	56	51	62	65	78
Passed	39	55	50	55	48	37
First Class	39	55	50	55	46	35
Second Class	00	00	00	00	02	02



■ Appeared ■ Passed ■ ■



# Results (UG)

## University Toppers

**2016**  
**PUJA DUTTA**



**2017**  
**ARIFA KAHKAHSAN**



**2021**  
**ARTITHI MISHRA**



**OVER ALL TOPPER**  
**Faculty of Science**





# Results (PG)



## University Topper

2016

KAMLESH YADAV

2018

BUDDHADEV GOSH

2019

ARIFA KAHKAHSAN

2020

NISHA KUMARI

2021

GULZAR NAZRA TABASSUM

2024

SHUBHOJIT DEY



OVER ALL TOPPER  
Faculty of Science

## PROGRAM SPECIFIC OUTCOMES (UG)

**UG:** After completing the FYUGP in Mathematics Major, a student will be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology. He will get adequate exposure to global and local concerns that explore them many aspects of mathematical sciences. He will able to apply their skills and knowledge that is translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.





## PROGRAM SPECIFIC OUTCOMES (PG)

**PG:** After completing M. Sc. In Mathematics, a student will have in-depth knowledge of branches of mathematics dealt in the class. He will have broad idea Real Analysis, Complex Analysis, Differential Geometry, Tensor, Integral Equation, Difference Equation, Topological Spaces, Graph Theory, Groups & Rings, Analytical Dynamics, Operations Research, Functional Analysis, Partial Difference Equations. This will help him in his future research work.



## ATTAINMENT OF OUTCOMES

Evaluation of Course Outcomes (COs) and Program Outcomes (POs) of the institutions were accomplished as per the standard parameters and guidelines set by different highly UGC-accredited institutions of the country. The SOP for this process and evaluation reports are available on College Web-Site

Link: <https://karimcitycollege.ac.in/wp-content/uploads/2024/08/KCC-CO-PO-ATTIANMENTS.pdf>

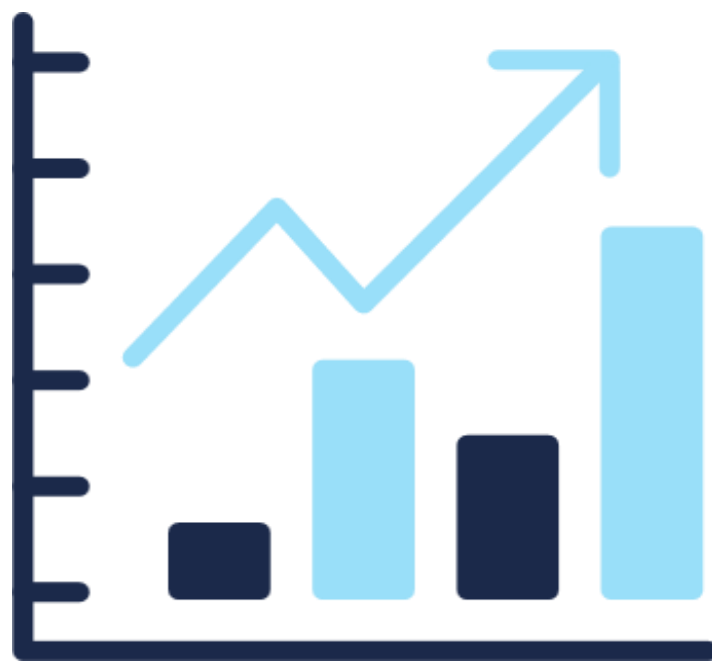




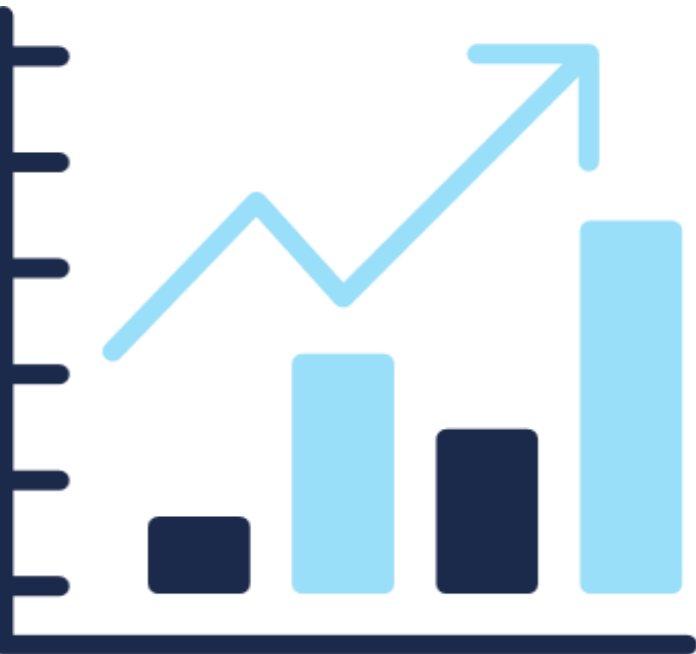
# Attainment of Outcomes (UG)



Session	Total No. of students Appeared in Exam	Target Average Score (%)	No. of Students scoring more than average percentage	Percentage of Total Students scored more than average percentage	Attainment Levels
2016-2019	108	61	58	36.99	1 (Low)
2017-2020	123	62	82	66.67	3 (High)
2028-2021	180	63	138	76.67	3 (High)
2021-2022	169	64	128	75.74	3 (High)
2022-2023	80	65	63	78.75	3 (High)



# Attainment of Outcomes (PG)



Session	Total No. of students Appeared in Exam	Target Average Score (%)	No. of Students scoring more than average percentage	Percentage of Total Students scored more than average percentage	Attainment Levels
2016-2019	39	64	35	97.44	3 (High)
2017-2020	56	65	53	94.64	3 (High)
2028-2021	76	66	76	100	3 (High)
2021-2022	62	67	53	85.48	3 (High)
2022-2023	65	68	30	46.15	1 (Low)



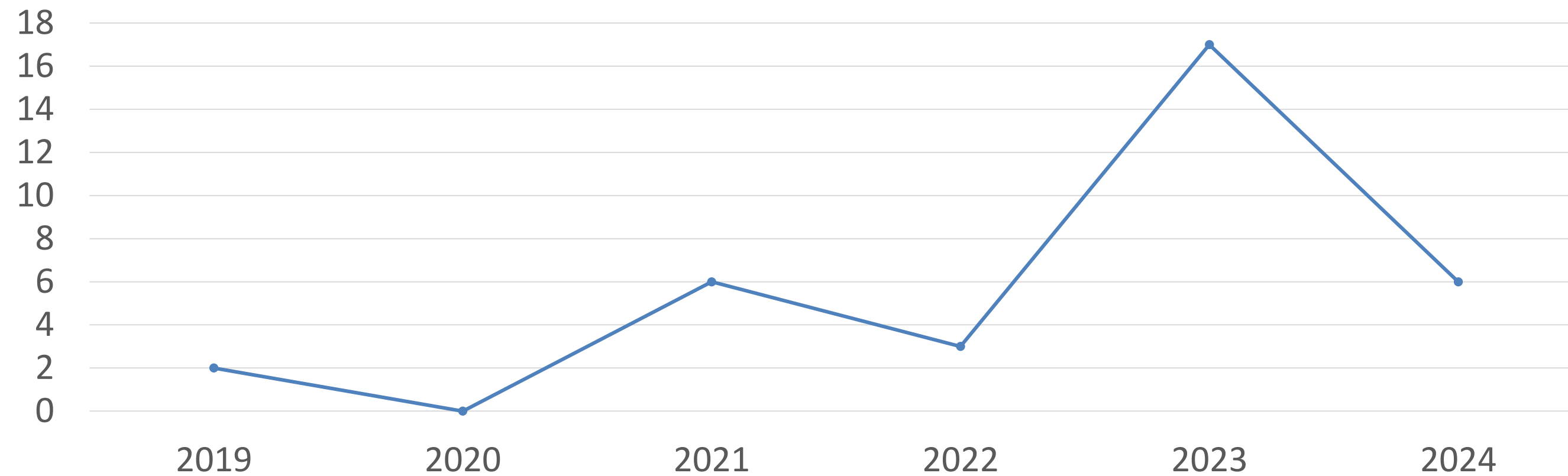


# Placements



Year	2019	2020	2021	2022	2023	2024
Number of Placements	2	0	6	3	17	6

Placements



# Recruiters





# Progression to Higher Education

- After completion of B. Sc. in Mathematics most of the students take admission in different PG programmes & vocational programmes such as M.Sc. M.B.A., B. Ed., MCA, MBA, etc
- After completion of M.Sc. in Mathematics many students get enrolled for Research Work
- We have our students pursuing Research in NITs, IITs, and many other reputed institutes of India

# Progression to Higher Education

## **Dr. Vikash Kumar Sinha**

M.Sc. From Karim City College

Ph. D. from VIT, Vellore

Now working as Assistant Professor at Srinath University,  
Jamshedpur

☎ 7209743411

## **Dr. Amit Kumar**

B.Sc. From Karim City College

Ph. D. from NIT Jamshedpur

Now working as Assistant Professor in Balrampur  
College, Balrampur, Purulia

☎ 8969163157

## **Dr. Ashish Kumar Prasad**

B.Sc. From Karim City College

Ph. D. from NIT Jamshedpur

Now working as Assistant Professor in Amity University,  
Ranchi

☎ 9931283062





# Progression to Higher Education



**Mr. Shanu Poddar**

B.Sc. From Karim City College

Pursuing Ph. D. from Shiv Nadar Institute of Eminence  
Noida, Delhi

☎ 8092604968

**Munish Haider**

B.Sc. From Karim City College

M.Sc. from AMU, Aligarh,

MBA from HITM, Agra

Now working in JUSCO, Jamshedpur

☎ 78923949893

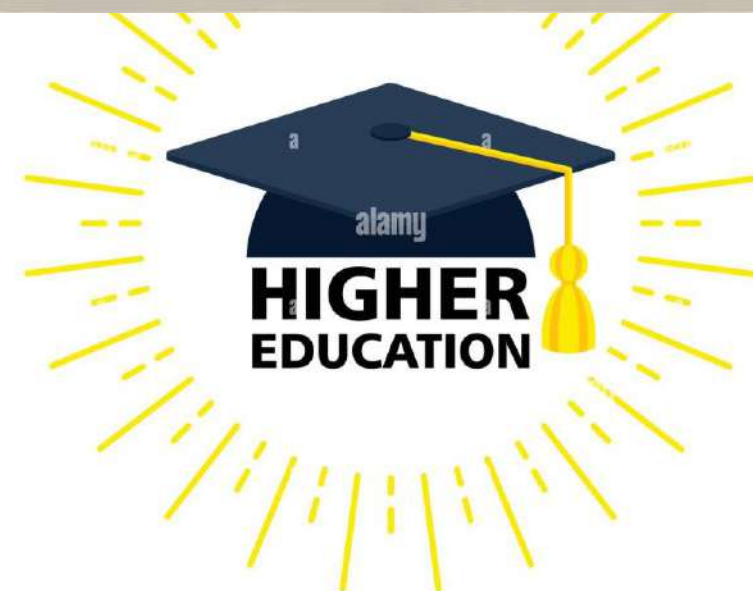
**Shoyab Khan**

B.Sc. From Karim City College

B. Ed. From Delhi University

Now pursuing M. Ed. from Jamia Millia Islamia, ND

☎ 8292691506





# Progression to Higher Education

## **Amit Gorai**

M.Sc. From Karim City College

B.Ed. From Co-operative college, Jamshedpur

Now working at Lal Bahadur Shastri +2 School,  
Jaipura, Singhbhum East

☎ 7070736383

## **Nitin Mohani**

B.Sc. From Karim City College

MCA from NIT Jamshedpur

Working in firm at Pune

☎ 9370055200

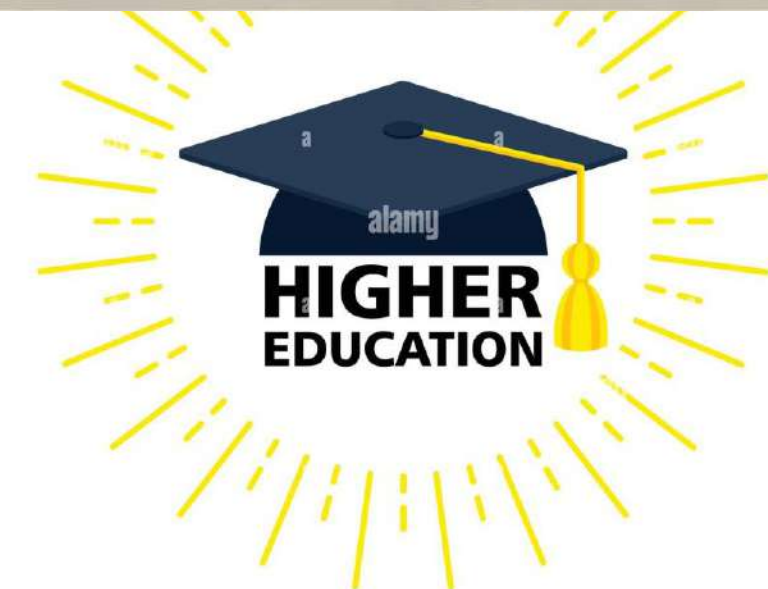
## **Vidya Sharma**

M.Sc. From Karim City College

Working in Bahra University, Shimla

Designation: Assistant Professor

☎ 6205243606





# Slow & Advance Learners Identification

Slow learners & Advanced learners are **identified** on the basis of...

- ◆ Internal Examination
- ◆ Assignments
- ◆ Class participation
- ◆ General responsiveness
- ◆ Attentiveness
- ◆ Participation in other activities

# Measures taken for slow learners

- ◆ Tutorial classes are arranged
- ◆ Additional study materials are supplied
- ◆ Reference books are provided
- ◆ Links of online lectures are provided
- ◆ Links of free e-books are provided to them

# Measures taken for advance learners

- ◆ Encouraged to participate in inter college events
- ◆ Encouraged to participate in workshops, seminars & conferences
- ◆ Special guidance sessions are arranged for various competitive examinations
- ◆ Special sessions are arranged for personality development



# Mentoring

Students of first semester are divided into groups and each group is assigned a mentor



```
graph TD; A[Students of first semester are divided into groups and each group is assigned a mentor] --> B[The mentors interact with the mentee and identify their problems and take action to resolve it.]; B --> C[Maintain the record of meeting between students and mentor];
```

The mentors interact with the mentee and identify their problems and take action to resolve it.

Maintain the record of meeting between students and mentor

## Objectives of Mentoring

- **Build Confidence:** To help students build confidence and a sense of belonging.
- **Clarify Goals:** To help students clarify their career goals and prioritize their studies.
- **Develop Skills:** To help students develop the skills they need to succeed in their personal and professional lives.
- **Gain Perspective:** To help students gain a broader perspective on their situation and refocus on what's important.
- **Build Networks:** To help students build professional networks and connect them with others in their field.
- **Navigate College life:** To provide insights into college culture and help students navigate issues like time and stress management.
- **Be a role model:** Mentors can be positive role models who help shape a student's behaviors, work ethic, and social persona.

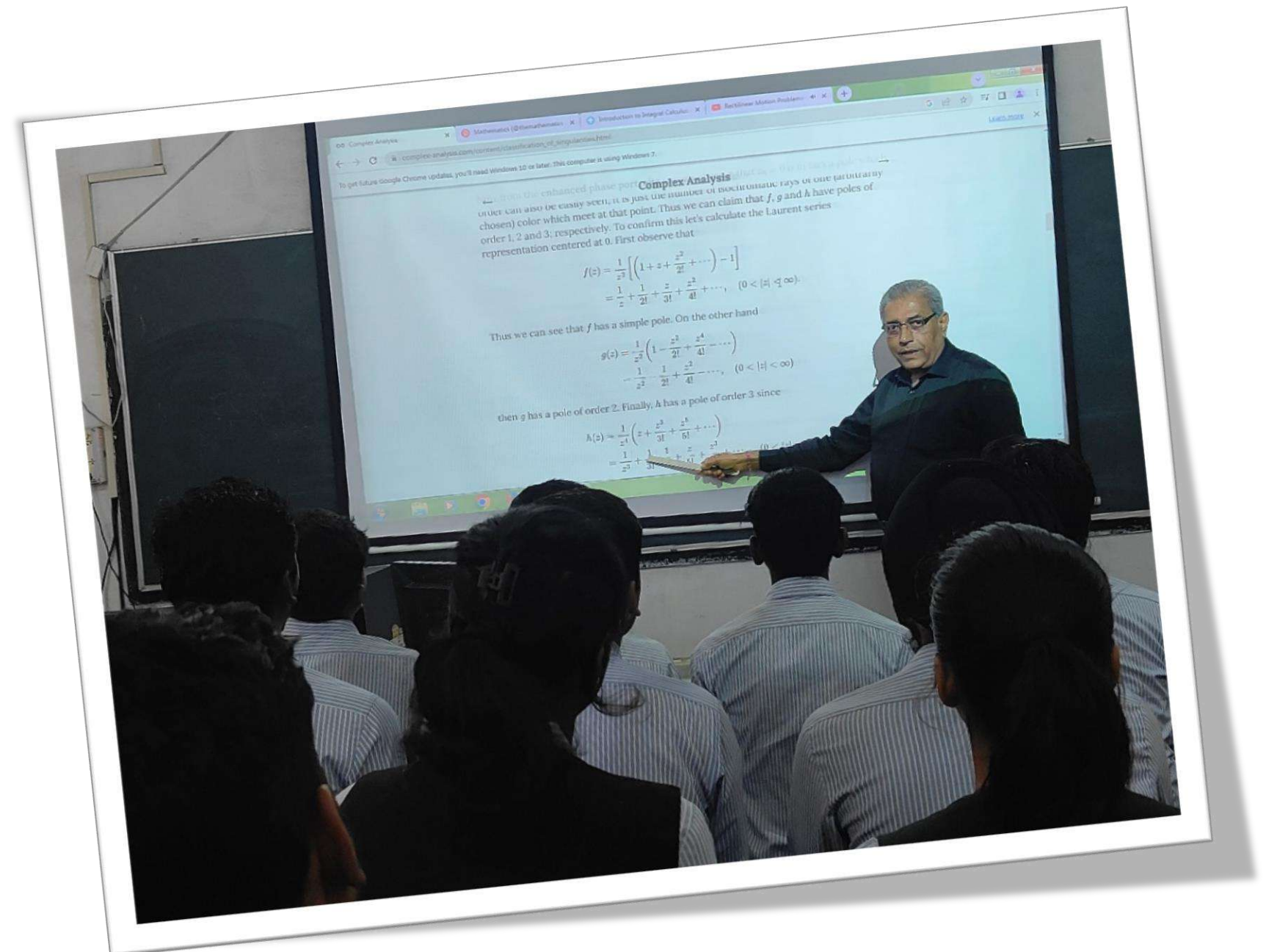


# Use of ICT tools

## Use of Smart Board



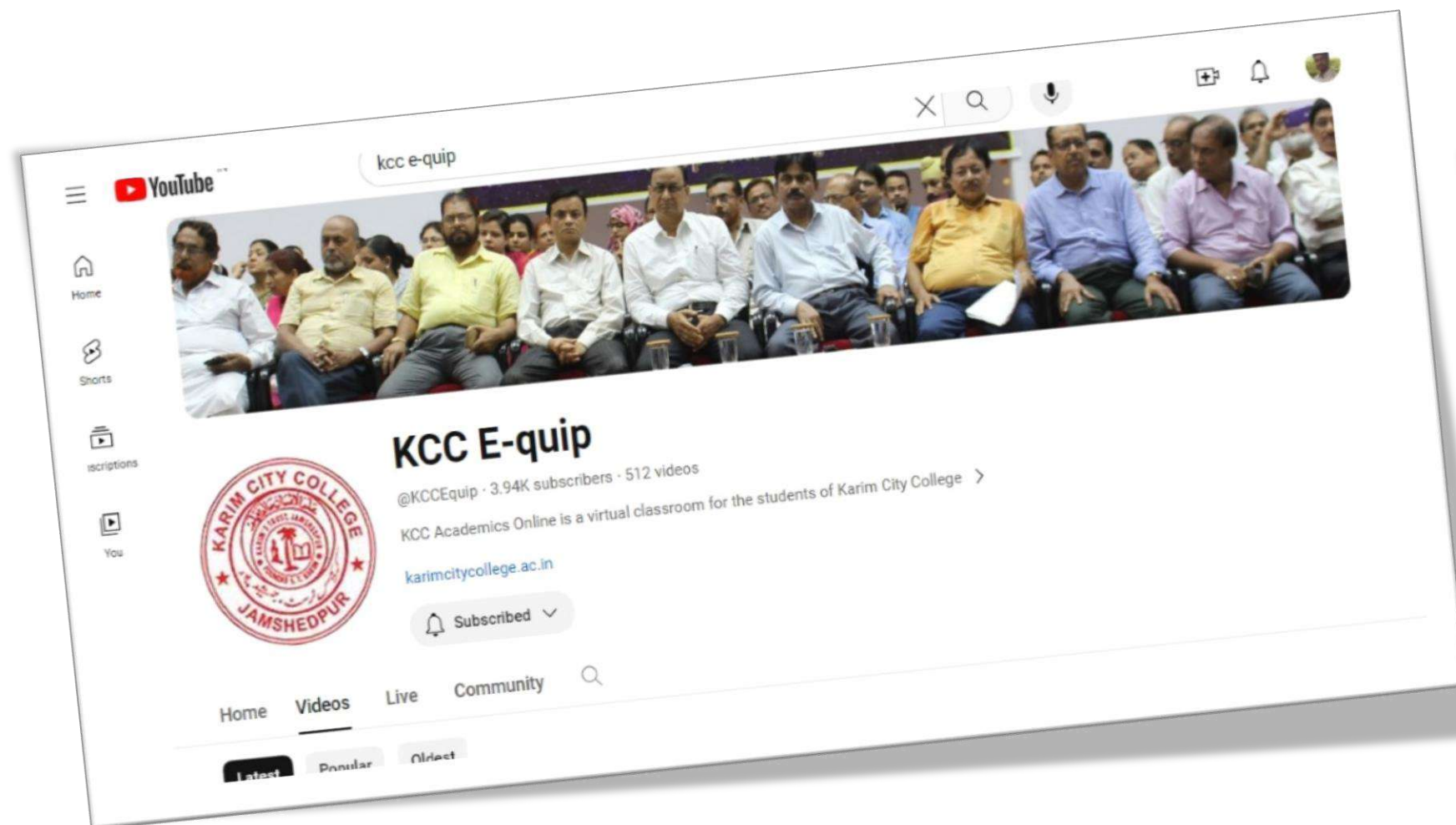
## Use of Online Resources





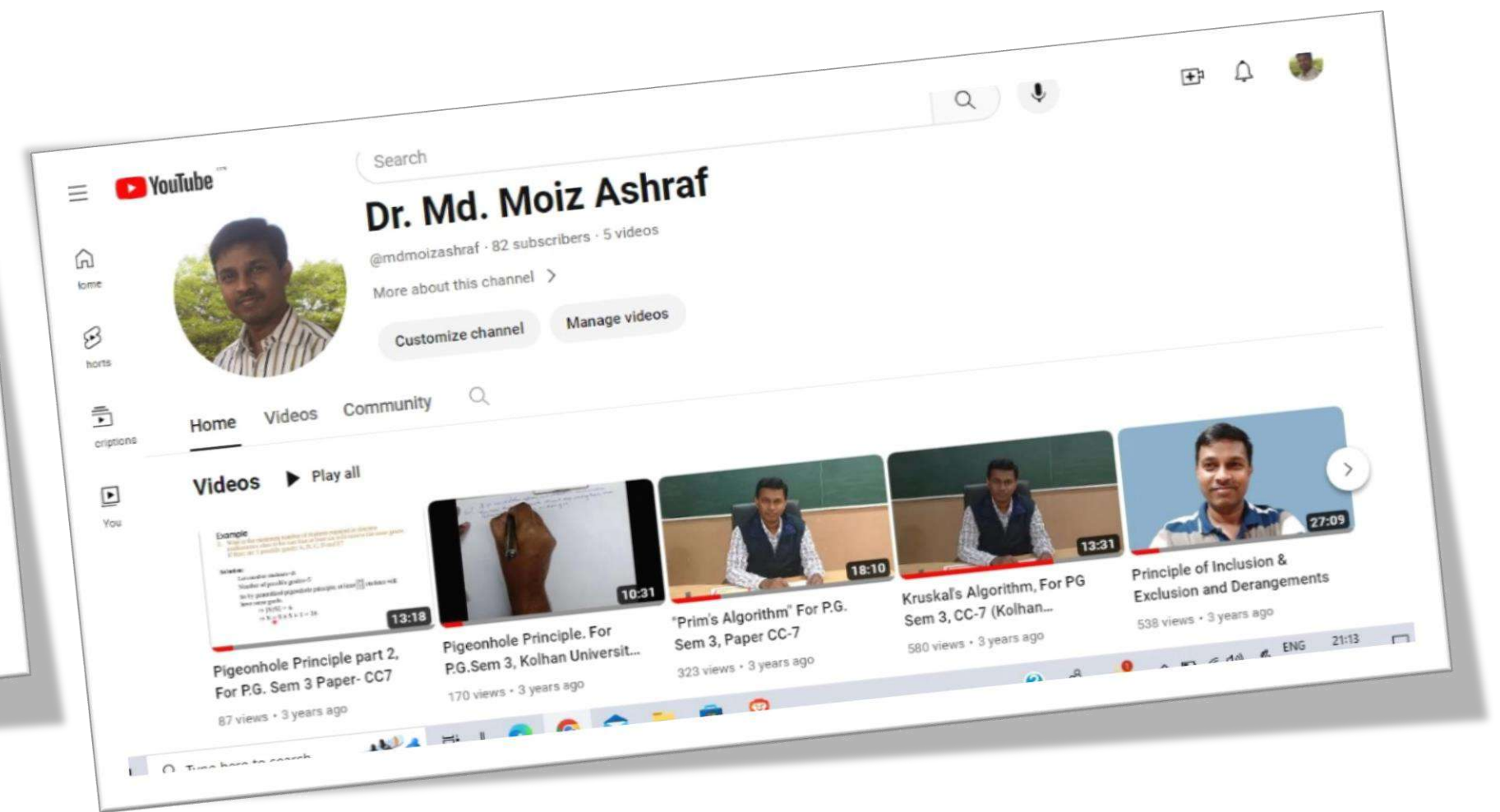
# Use of ICT tools

## YouTube Channel of College



LINK: [KCC-E-quip](https://www.youtube.com/channel/KCCEquip)

## YouTube Channel of Faculty



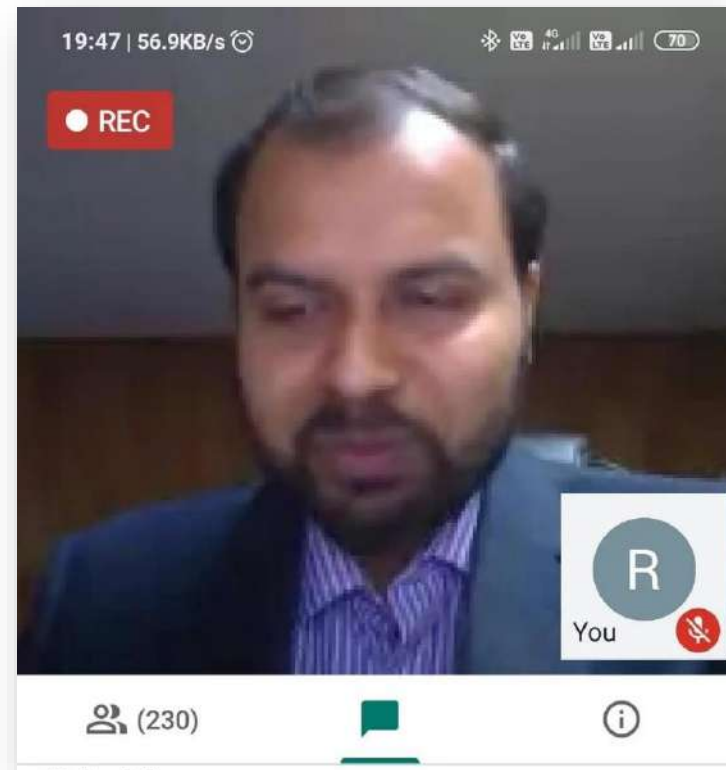
LINK: [Md. Moiz Ashraf](https://www.youtube.com/channel/mdmoizashraf)

# Use of ICT tools

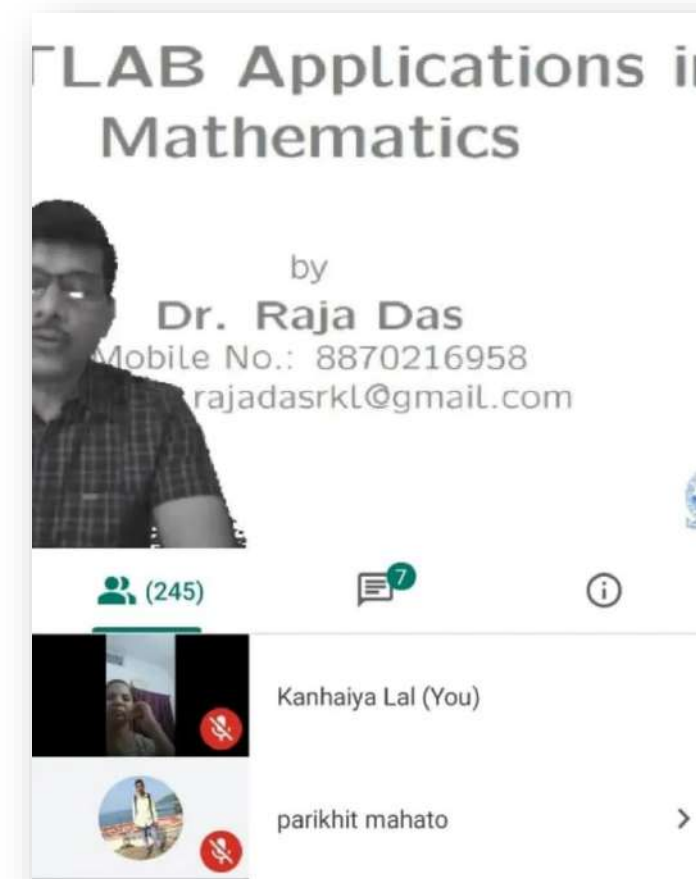
## Online Guest Lectures



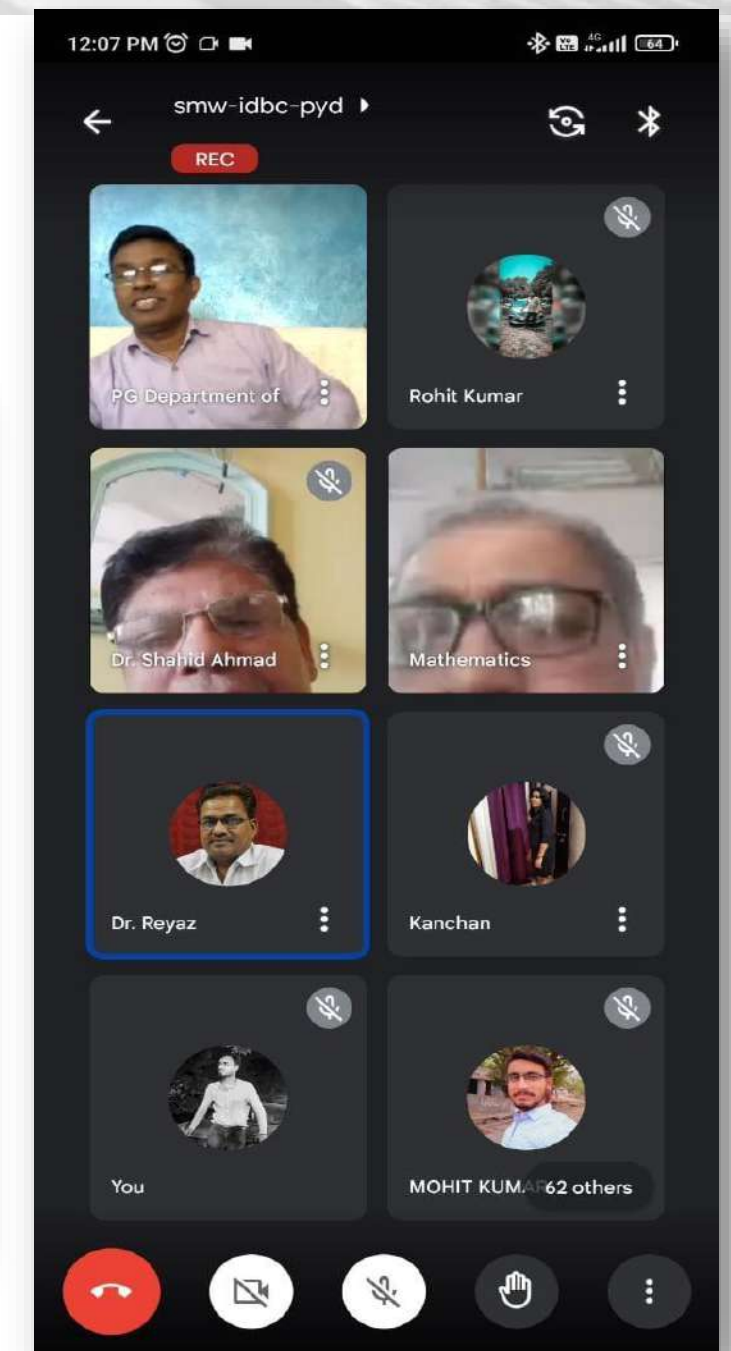
Lecture by  
**Dr. Ranjeeta Chaterjee**



Lecture by  
**Dr. Ritwik Bandyopadhyay**



Lecture by  
**Dr. Raja Das**

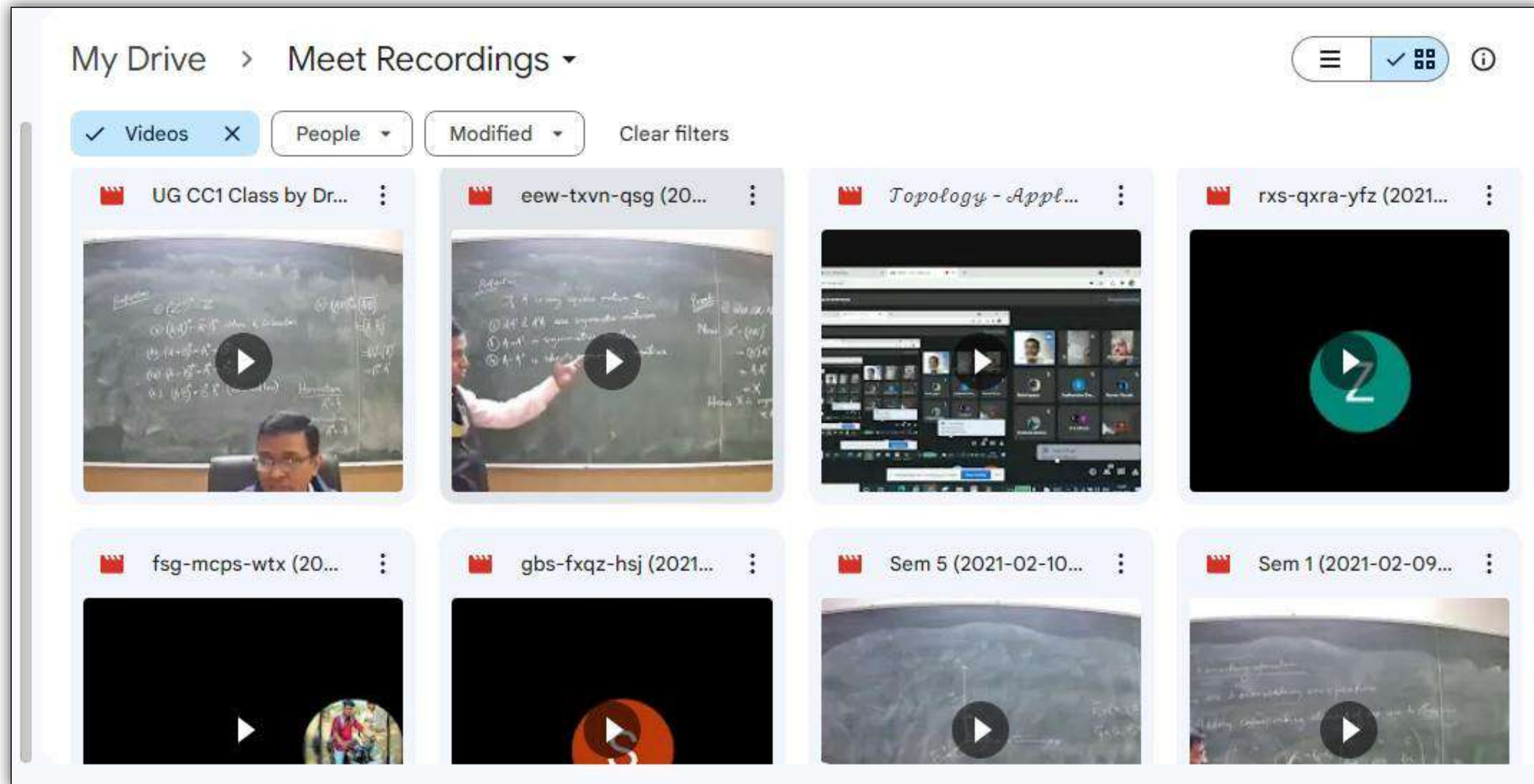


Lecture by  
**Mr. Suprabhat Mohapatra**



# Use of ICT tools

## Online Classes Via Google-Meet





# Use of ICT tools

## e-resources for learning Mathematics

<https://www.freebookcentre.net/SpecialCat/Free-Mathematics-Books-Download.html>

<https://medium.com/free-stuff/free-math-books-a83aff081d89>

<https://freecomputerbooks.com/mathCategory.html>

<https://mathblog.com/mathematics-books/>

<https://bookboon.com/en/mathematics-ebooks>

<https://examupdates.in/m-sc-books/>

<https://www.gutenberg.org/ebooks/>





# Departmental Library

(I) 110 Reference books are available for teachers & students of Mathematics Department

(II) Books are issued temporarily to students during the college hours

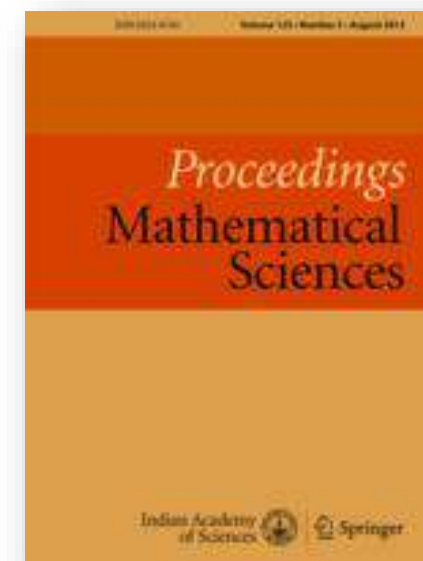
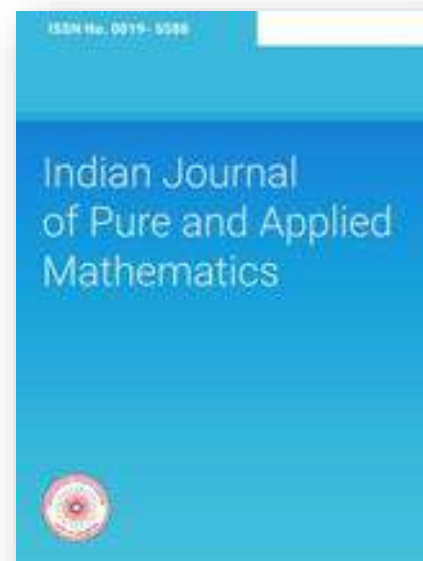
(III) 10 pcs are available for students to browse offline & online libraries



# Mathematics Journals available in Central Library

## Journals Subscribed

- Indian Journal of Pure & Applied Mathematics.
- IOSR Journal of Mathematics.
- Proceedings Mathematical Science.





# About Math-Lab

- 10 Computers with internet connectivity.
- 20 scientific calculators.
- Projector with Screen.
- Printer
- Maple Software.

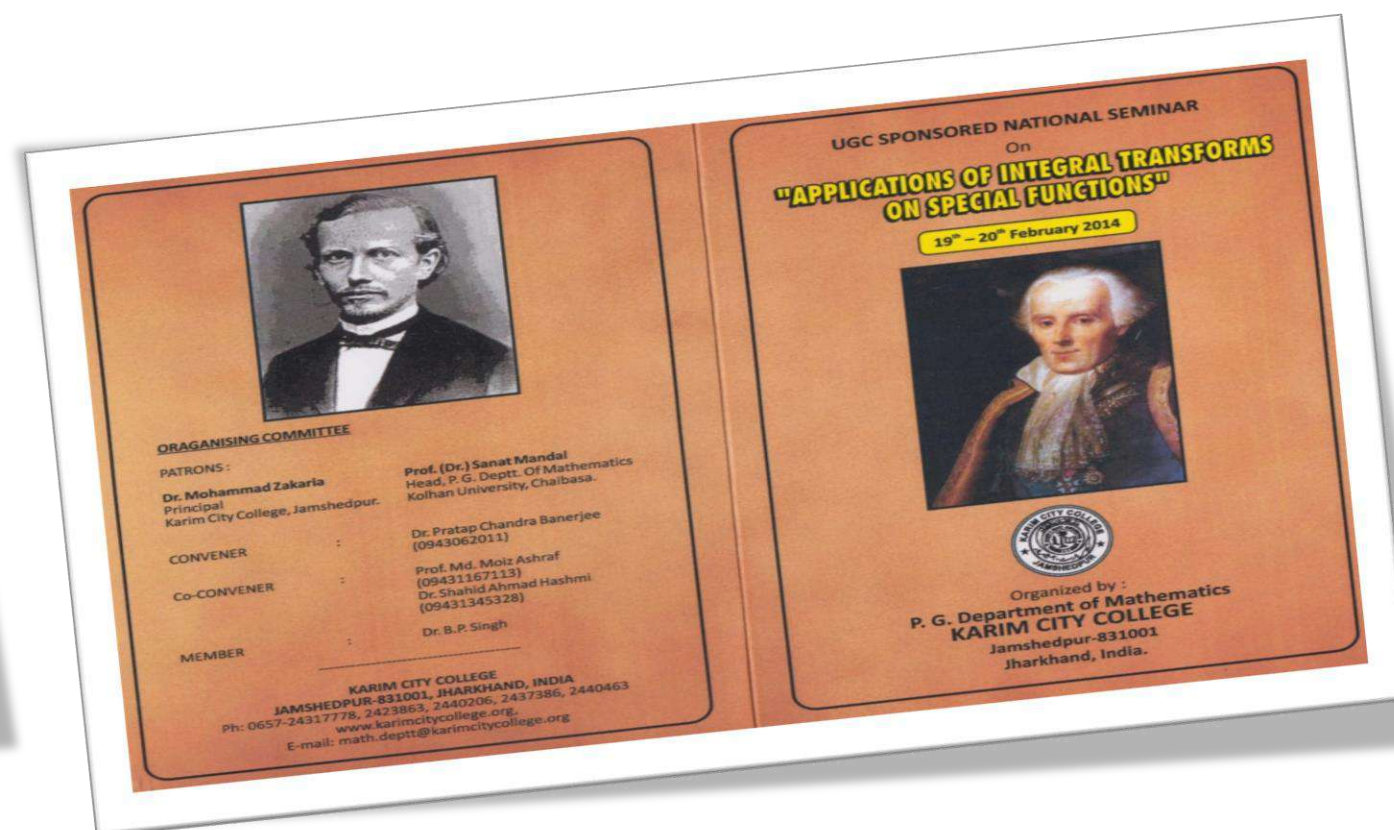


Maple™



# Activities of the Department

- The Department has organised a UGC sponsored **Two-Day National Seminar** in 2014 on the topic “**Application of Integral Transform on Special Functions**”.
- Prof. (Dr.) Sharfuddin Ahmad from Jamia Millia Islamia, New Delhi was Chief Guest.
- Prof A. Roy from IIT Kharagpur was Guest of Honour.



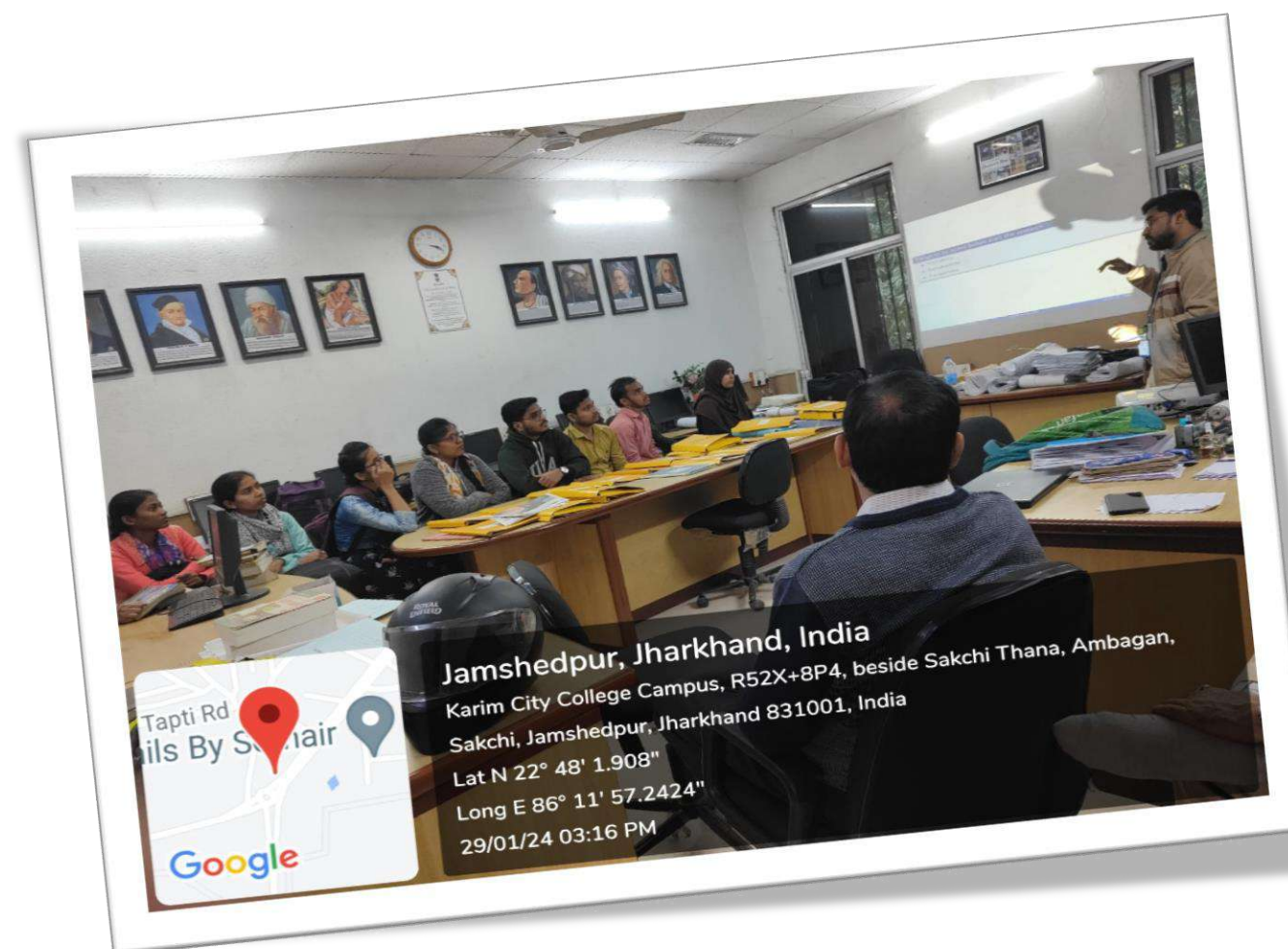


# Activities of the Department

## Lectures by Alumni



Lecture by our Alumni **SHANU PODDAR**  
Research scholar  
Shiv Nadar Institute of Eminence  
Noida, New Delhi



Lecture by our Alumni **Dr. Vikash Sinha**  
Assistant Professor  
Srinath University  
Jamshedpur



# Activities of the Department

## Students' Seminar



**Topic: Application of Operations Research**



**Topic: Application of Topology in daily life**



# Activities of the Department

## Regular Class Tests



**Class Test of PG Students**



**Class Test of UG Students**

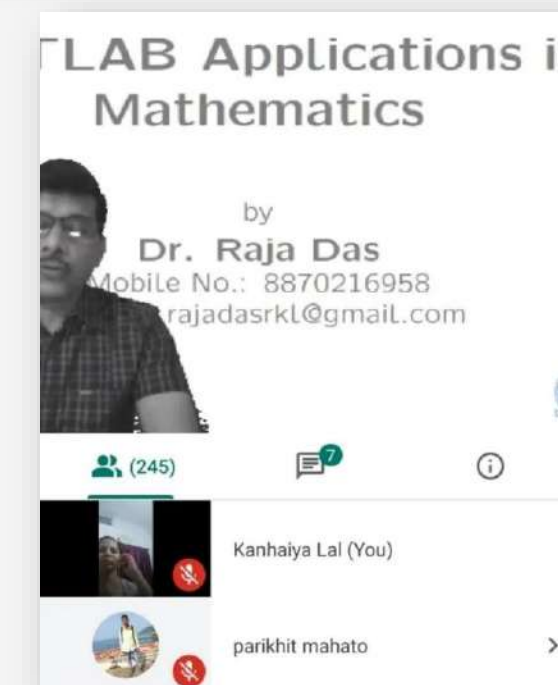
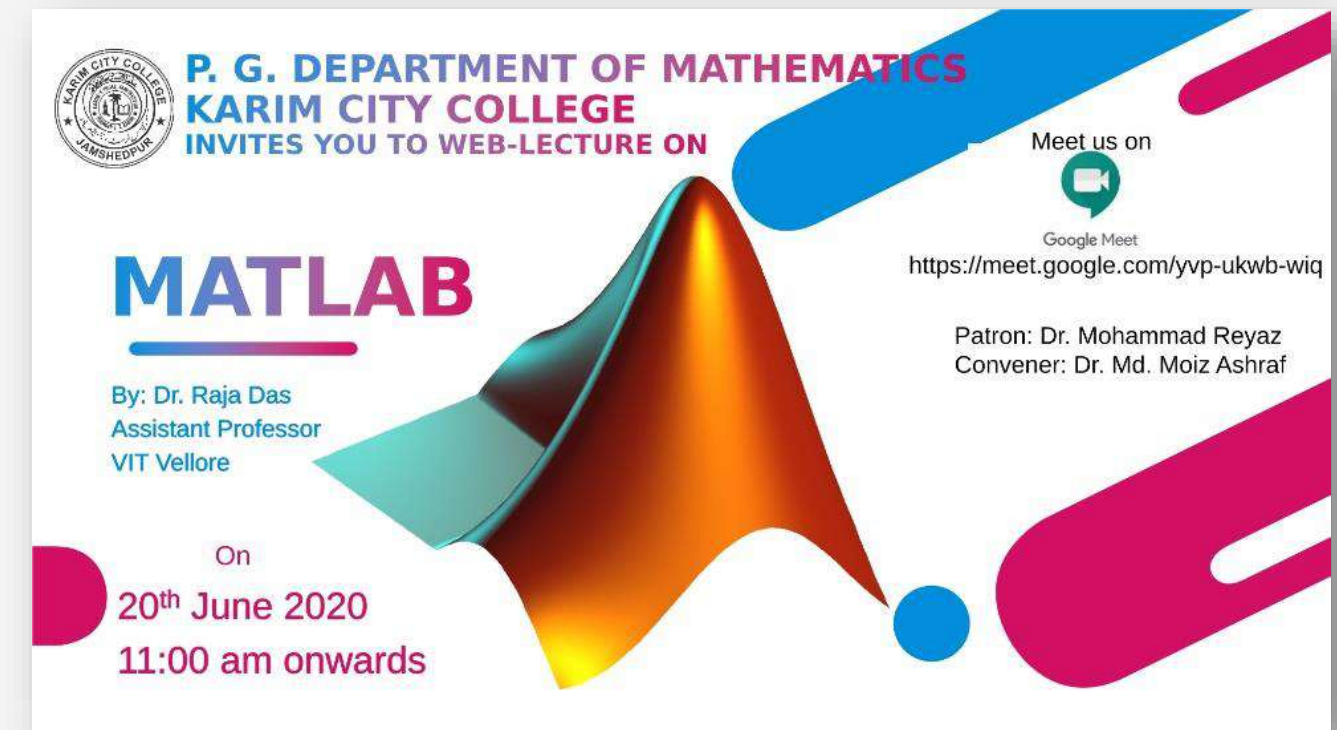


# Activities of the Department

## Online Lectures

Online Lecture by **Dr. Raja Das**  
Assistant Professor  
VIT Vellore

**Topic:** MATLAB  
**Date:** 20/06/2020



# Activities of the Department

## Online Lectures

Lecture by **Dr. Ritwik Bandyopadhyay**  
Post Doctoral Research Associate  
School of Aeronautics and Astronautics,  
Purdue University, USA

**Topic:** The story of a few integers  
**Date:** 21/06/2020

P. G. Department of Mathematics, Karim City College  
invites you to Web-Lecture

**Topic**

The Story of a few integers

by

**Ritwik Bandyopadhyay**  
Post Doctoral Research Associate,  
School of Aeronautics and Astronautics,  
Purdue University, USA

Patron:  
Dr. Mohammad Reyaz  
Convener:  
Dr. Md. Moiz Ashraf

Join us on:  
<https://meet.google.com/rqx-yfine-sfu>

On Sunday,  
21/06/2020  
At 7:00 pm






# Activities of the Department

## Online Lectures

Online Lecture by **Mr. Suprabhat Mohapatra**  
Director, FASTEK Technologies Pvt. Limited  
Bengaluru

**Topic:** Topology- Application in Computer  
Programing

**Date:** 15/06/2021




**P. G. DEPARTMENT OF MATHEMATICS**  
**KARIM CITY COLLEGE**  
INVITES YOU TO WEB-LECTURE ON

### Topology- Application in Computer Programming

By. **Suprabhat Mohapatra**  
Director, Fastek Technologies Pvt. Ltd.

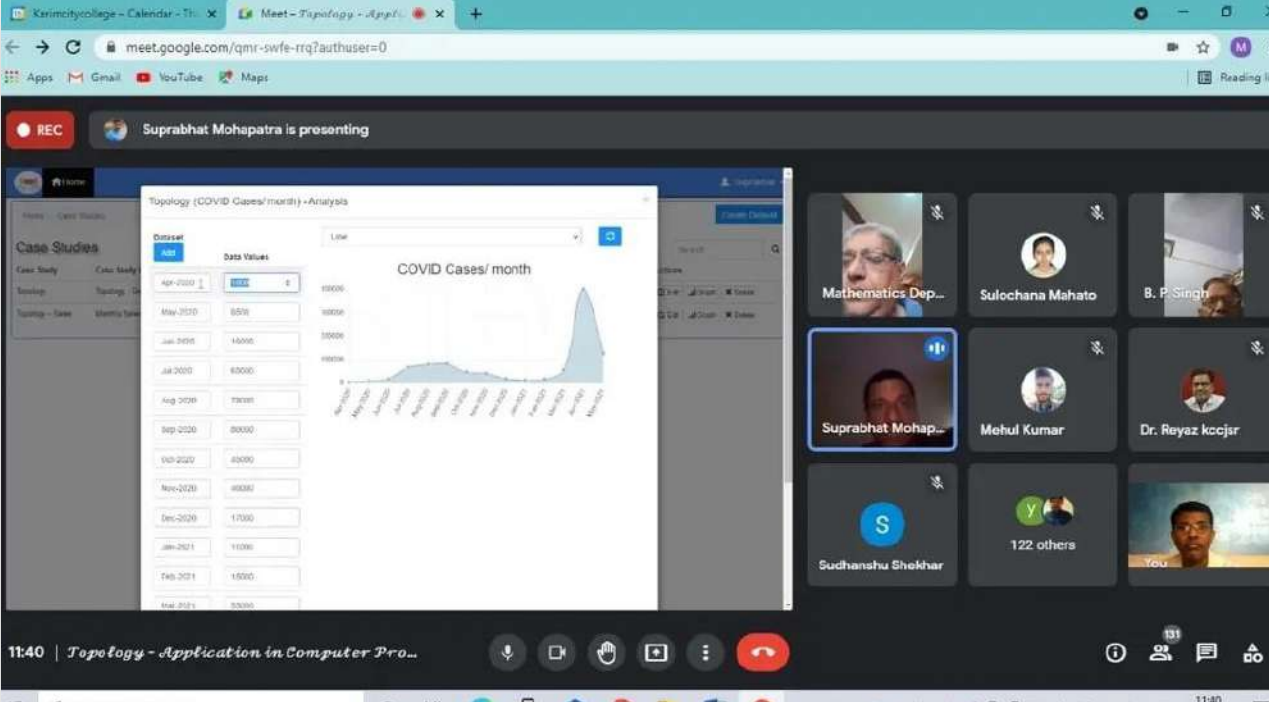

Patron:  
**Dr. Mohammad Reyaz**  
Prof. in charge

Meet us on  
  
Google Meet  
<https://meet.google.com/qmr-swfe-rrq>

On  
**15<sup>th</sup> July 2021**  
**11:00 am onwards**

Convener:  
**Dr. Md. Moiz Ashraf**  
(Head of Department)

Co-Conveners:  
Dr. P. C. Banerjee  
Dr. S. A. Hashmi  
Dr. B. P. Singh  
Prof. Yasmin Banu



# Activities of the Department

## Online Lectures

Online Lecture by **Dr. Ranjeeta Chatterjee**  
Assistant Professor  
R M College, Akurdi, Pune

**Topic:** Science & Pandemic  
**Date:** 28/02/222





# Activities of the Department

## National Science Day



**2020**



**2023**



**2022**



**2024**



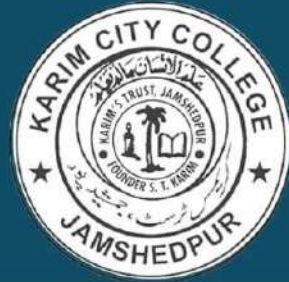
# Activities of the Department

## National Mathematics Day

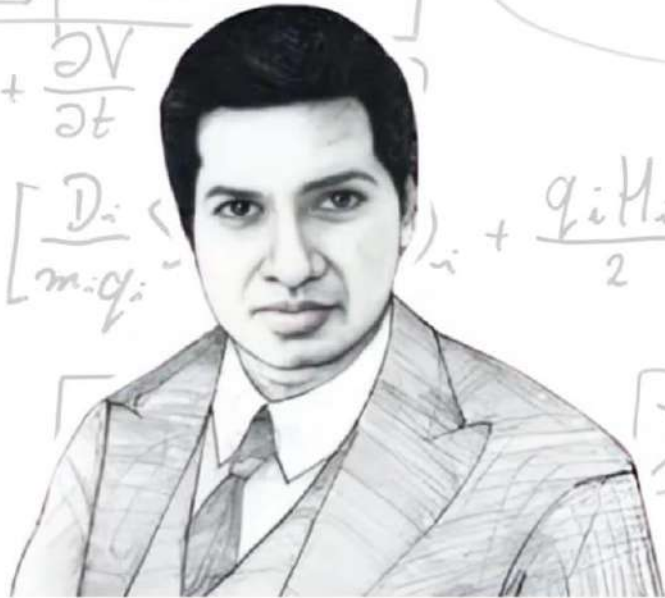




### Student's Seminar to celebrate National Mathematics Day 2024


Theme: “Mathematics: The Bridge to Innovation & Progress”

**PG DEPARTMENT OF MATHEMATICS  
KARIM CITY COLLEGE**

**ORGANISES  
STUDENT SEMINAR TO CELEBRATE  
NATIONAL MATHEMATICS DAY - 22ND DECEMBER**

**TOPIC :- MATHEMATICS:  
THE BRIDGE TO INNOVATION & PROGRESS**

 December 23, 2024  
 11:30 A.M

 E-Class Room No: 2



# Activities of the Department

## Regular PT Meetings

The Department organizes Regular PT meetings to discuss progress of students with the parents





# Activities of the Department

## Quiz Competition



## Induction of New Batches



## Farewell of outgoing Batches





# Facilities Provided to students

- Classrooms with light & fans
- Classroom with projector for teaching with PowerPoint & Online resources
- Math-Lab with 10 computers, Calculators and Maple software
- Departmental Library with more than 100 reference books
- Study material on KCC-Equip(Videos & pdfs)

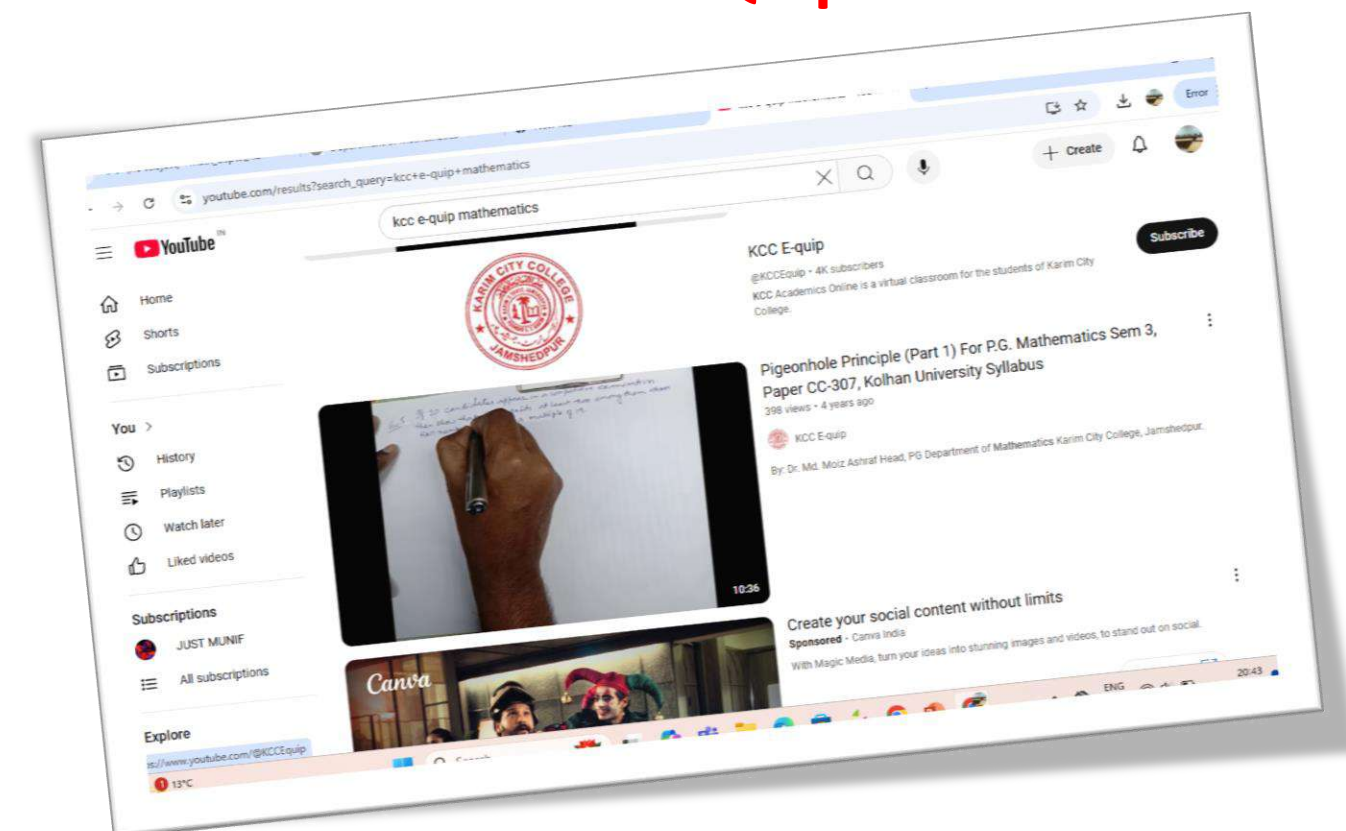
**Class Rooms with Projector**



**Math-Lab**



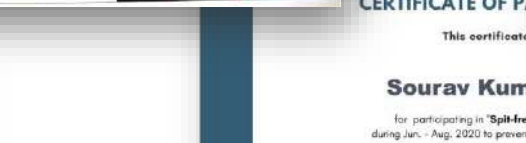
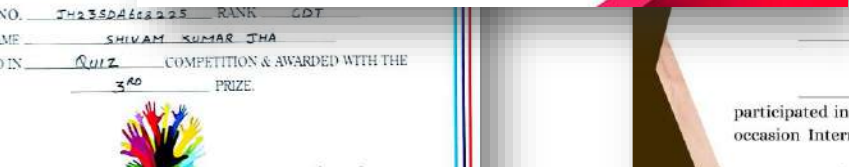
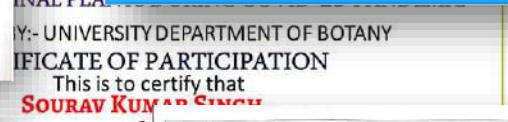
**KCC E-Quip**





# Student's Achievements

## In Extra Curricular/Co-Curricular Activities





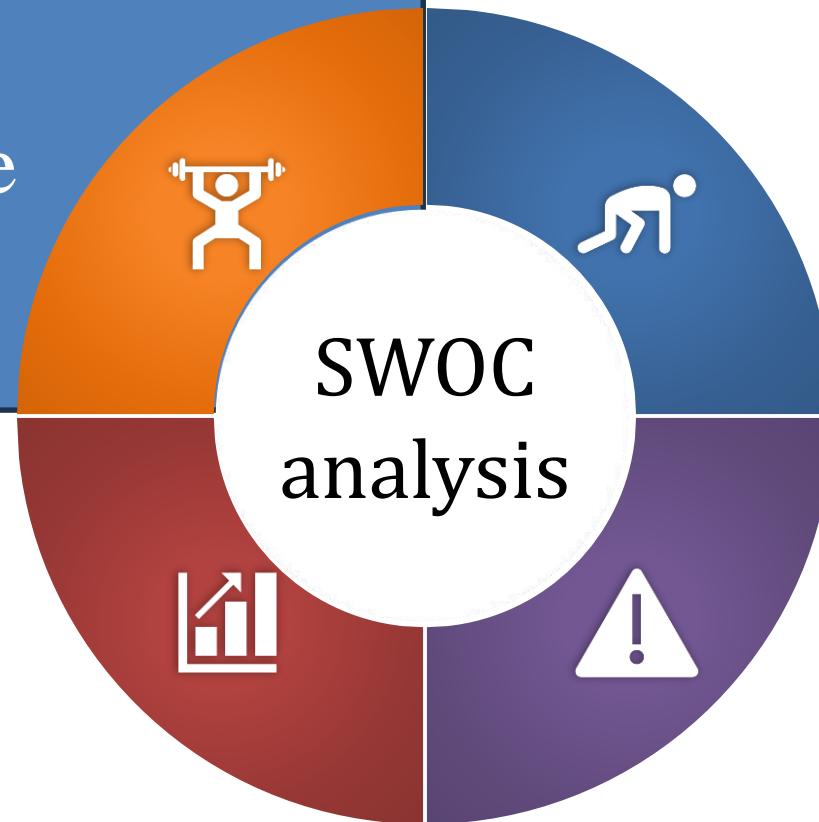


- Lectures by Successful Alumni
- Online Lectures by dignitaries
- Organize students' seminars in the Department
- Sharing information through Social media (X, WhatsApp)
- Lecture notes sharing through WhatsApp groups
- Special classes for doubt solving



# Strengths

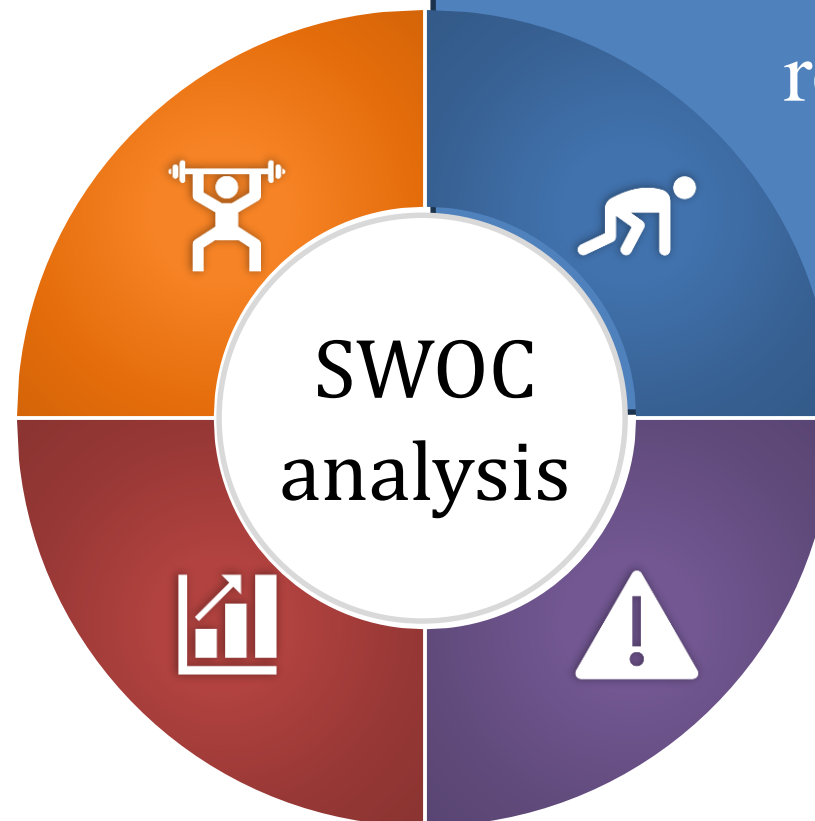
- Well qualified, efficient & dedicated faculty
- Well equipped Math-Lab
- Outside class activities like Student Seminars & Quizzes.
- YouTube Channel KCC-EQUIP & Personal YouTube Channels of Faculty
- Hand written notes on College website





## Weaknesses

- The Department does not offer any certificate and value added courses
- Absence of collaboration/MoU with reputed institutions and Industry





## Opportunities

- Being situated in a industrial city, we have the opportunity to collaborate with various industries
- With so many colleges in the city we have the opportunity to conduct student & faculty exchange programs with other colleges.





## Challenges

- To establish a high quality research centre in the Department
- Lack of interest among the students in Higher Education
- Low placement after completion of UG & PG programmes

# Future Plans

## Long term

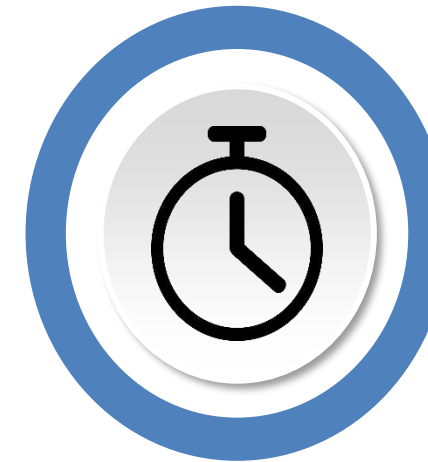
- To start advanced research center in the Department



## Short term

## Short term

- To start short term certificate programmes



## Long term



# Connect with us.



Email

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Thank you!