



ARYABHATA
The Great Indian Astronomer
& Mathematician



Welcome
NAAC Peer Team Members
(19th September, 2024)

DEPARTMENT OF MATHEMATICS

SHANTI PRASAD JAIN COLLEGE, SASARAM



Presentation

(19th September, 2024)

by

Dr. Ujjwal Kanti Ghoshal

Department of Mathematics



DR. UJJWAL
KANTI
GHOSHAL
**Head
of the
Department**

“With outstanding performance at the University level examinations for years together, the department at present runs with BSc and M.Sc. courses in Mathematics and has a student huge strength. This department has its own performance among all other departments in the college. The department intends to promote higher studies and academic excellence build a sense of confidence and an opening up of better opportunities both for teacher and the taught. The Department holds Terminal Examinations, Test Examination, Mock Test for every year for all Students of the Department. Guardian-teacher meetings are held for those students whose performance is not up to desire level. Extra classes are always held in those papers which have not been able to complete the syllabuses time.

We believe that completing the syllabus is not enough; completing the syllabus properly is our aim. Also, we use to motivate our students about the scope of higher studies, research in Mathematics at different Universities and Institutes. Special classes also always organized for PG students to prepare for exams like CSIR-NET and GATE.”



Our Vision

1. To be recognized broadly for its excellence in teaching and research.
2. Should be remembered in providing excellent Mathematical skills to its UG, PG and Ph. D. students.
3. To create a platform for encouraging outcome based research environment.



MISSION

1. To provide high quality Mathematical skills to both undergraduate, post graduate students.
2. To provide in significant research to our research scholars.
3. To attend the mathematical needs of the institute and the community.
4. To provide students (UG/PG) with a wide spectrum of valuable courses.
5. Guiding students to establish for a good future.
6. To encourage both students for good and valuable research.



DEPARTMENT OF MATHEMATICS

Name of the Department : Mathematics

Particulars	U.G. & P.G.
Program offered in Semester/CBCS	Semester
Course offered	BSc & MSc
Course Approved Year	U.G. – 1952 , P.G. 2001
Students Sanctioned Seat	U.G.- 250, P.G.- 78
Course Duration	U.G.- 4 Years, P.G.- 2 Years
Current admitted in Session U.G. 2024-28 and P.G. 2023-25	U.G. – 243, P.G. - 87



Faculty Strength

Designation	Sanctioned	Filled
Professors	03	Nil
Associate Professors		Nil
Assistant professor		01
Guest Faculty		Nil

Permanent Teacher - 01
Guest Teacher - 00
Total Full Time Teachers - 01



Permanent Teacher Profile

Name	Qualification	Designation	Years of Experience	Total No. of Ph.D. Awarded
Dr. Ujjwal Kanti Ghoshal	Ph.D, CSIR-NET	Assistant Professor	More than 6 years	00



Program Outcomes and Program Specific Outcomes as Per V.K.S.U., Ara

Program Outcomes

PO1: Professional knowledge: Acquire comprehensive knowledge of major concepts, theoretical principles.

PO2: Critical thinking and Cognitive skills: Convey the intricate science information effectively and efficiently, analyze and solve the problems related to mathematics.

PO3: Employability and higher Education: Show proficiency in professional, employability and develop skills required for higher education and placements.

PO4: Ethics: Imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality in the field of science.

PO5: Science and Society: Apply reasoning acquired by the scientific knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional science practice.

PO6: Interdisciplinary Learning: Integrate academic curriculum with other co- curricular goals, such as career development, life-long learning, develop interdisciplinary learning and opportunity to extend their knowledge across all disciplines.

PO7: Nation Building: Introspect and evolve into dynamic and creative individuals capable of socially productive, constructive actions that positively impact our Nation and the World at large.



Program and Program Specific Outcomes as Per V.K.S.U., Ara

Program Specific Outcomes

PSO1: Develop basic concepts of the topic taught, which will help the students them in solving problems related to the mathematics.

PSO2: Apply the concepts to various fields of mathematics.

PSO3: Apply well equipped at different competitive examinations like IIT-JAM, NBHM, CSIR-NET, GATE etc for higher studies in Mathematics. They also become eligible for public service examinations and other employment related examinations.

PSO4: Develop skills in problem solving, critical thinking and analytical reasoning.

PSO5: Gain advanced knowledge on topics in pure and applied Mathematics empowering the student to pursue higher degrees at reputed academic Institutions

PSO6: Acquire awareness towards gender, environment, sustainability, human values, and professional ethics and understand the difference between acting, responding, reacting to various social issues.



Research & Publications

Sl. No	Name of the Teacher	Title	Journal's Name	Year of Publication
01	Dr. Ujjwal Kanti Ghoshal	Transport of a Heated Hydrophobic Spherical Particle Through Porous Medium	Journal of Porous Media	2020
02	Dr. Ujjwal Kanti Ghoshal	Non-linear Effects on Electrophoresis of a soft Particle and Sustained Solute Release	Transport in Porous Media	2017
03	Dr. Ujjwal Kanti Ghoshal	A Numerical Study on Hydrodynamics of a soft Particle with Heated Hydrophobic Core	Recent Patents in Mechanical Engineering	2017



Research & Publications

Sl.No	Name of the Teacher	Title	Journal's Name	Year of Publication
04	Dr. Ujjwal Kanti Ghoshal	Study on Electro-osmotic Fluids in Nanofluidic Channels	Indian Journal of Contemporary Science	2022
05	Dr. Ujjwal Kanti Ghoshal	Study on AC Electro-osmotic Flow Patterns	Indian Journal of Contemporary Science	2022



Our Faculties Participation in Refresher/Orientation/FDP

Name of the Teacher	No. of Refreshers Courses	No. of Orientation Programme	No. of FDP/Workshop
Dr. Ujjwal Kanti Ghoshal	02	01	01



Academic Activities of the Department

Title of Program/Activities	Date	Details of Recourse Person
PG Departmental seminar(Sem-I, 2023-25)	11.09.2024	Dr. Navin Kumar
PG Departmental Seminar(Sem-III, 2022-24)	17.08.2024	Dr. Sushil Kumar
PG Departmental Seminar(Sem-II, 2022-24)	07.05.2024	Dr. Rajesh Kr. Sinha
PG Departmental Seminar(Sem-I, 2022-24)	15.01.2024	Dr. Jai Prakash
PG Departmental Seminar(Sem-IV, 2021-23)	14.05.2024	Dr. Shyam Raj Yadav



Interaction between students and teacher in smart class room¹⁵



DEPARTMENT OF MATHEMATICS

Enrolment Position in UG Programme From 2017-18 to 2024-25

Session / Year	Part -I/ Sem-I	Part -II/ Sem-III	Part -III/ Sem-V
2024-25	243	214	Admission in progress
2023-24	232	219	219
2022-23	224	217	219
2021-22	229	226	215
2020-21	241	224	229
2019-20	235	220	203
2018-19	228	210	210
2017-18	217	209	204
Total	1849	1739	1499



**Enrolment Position in P.G Programme
From 2017-18 to 2023-24**

Year	Sem-I	Sem-III
2023-24	87	65
2022-23	79	64
2021-22	80	64
2020-21	80	80
2019-20	80	83
2018-19	83	51
2017-18	62	50
Total	531	457



DEPARTMENT OF MATHEMATICS

U.G. Pass Percentage Final Year Session - 2017-18 to 2023-24

Session / Year	Total No. of Appeared Students in Final Year	Total No. of Pass Student	Overall Pass Percentage
2023-24	219	219	100
2022-23	219	215	98.1
2021-22	215	209	97.2
2020-21	229	219	95.6
2019-20	203	191	94
2018-19	210	201	95.7
2017-18	204	195	96



Enrolment Position in the current year 2024-25 (U.G.)

	U.G.	
	Male	Female
Sem I	182	61
Sem-II	174	40
Sem- III	174	40
Part- III	142	30
Total	672	171
Total (M+F)	843	



Enrolment Position in the current year 2023-24 (PG)

	P.G.	
	Male	Female
Sem I	57	30
Sem-II	27	36
Sem- III	27	36
Sem- IV	27	36
Total	158	138
Total (M+F)	296	



DEPARTMENT OF MATHEMATICS

P.G. Pass Percentage Final Year Session - 2016-17 to 2023-24

Session / Year	Total No. of Appeared Students in Final Year	Total No. of Pass Student	Overall Pass Percentage
2023-24	62	Continuing	
2022-23	62	61	98.38
2021-22	63	63	100
2020-21	67	63	94
2019-20	69	67	97.1
2018-19	51	46	90.2
2017-18	50	48	96



DEPARTMENT OF MATHEMATICS

Photographs(Departmental Seminars)





DEPARTMENT OF MATHEMATICS

Photographs (During taking classes)



Shot on OnePlus
BY VISHAL PATEL



DEPARTMENT OF MATHEMATICS

Some photographs during departmental Seminar of PG





Achievements

1. With limited capacity we are continuing both UG and PG courses successfully.
2. Maximum students pass with very good percentage.
3. A lot of students got job in different institutions.
4. With limited research facility three articles published in reputed journals.



Our Distinguished Alumni Members

Sl. No.	Name of the Alumni with Address	Pass out Session	Organization Name/Address	Designation
01.	SANJEEW KUMAR	2013-15	BSEB, PATNA	ASSISTANT TEACHER
02.	PALLAVI KUMARI	2018-20	BSEB, PATNA	ASSISTANT TEACHER
03.	RAVISH KUMAR	2017-19	VKSU, ARA	RESEARCH SCHOLAR
04.	ARUN KUMAR PATHAK	2017-19	VKSU, ARA	RESEARCH SCHOLAR



Topper of our college U.G. Students in University/District

Sl. No.	Session	Name of the Students	University Roll No.	Pass Percentage
1	2021-24	Khushboo Kumari	21301372670	80.5
2	2020-23	Abul Kalam	20301372479	74.62
3	2019-22	Hritika Kumari	19301372410	75.5
4	2018-21	Avinash Singh	183014050077	74.37
5	2017-20	Bhupendra Kumar	3173010377	77.87



Topper of our college P.G Students in University/District

Sl. No.	Session	Name of the Students	University Roll No.	Pass Percentage/CGPA
1	2017-19	Chandra Bhushan Tiwari	183010033175	79
2	2018-20	Shubham Kumar Singh	1930105321	77.81
3	2019-21	Rohit Kumar	1930105059	8.06
4	2020-22	Mithilesh Kumar	2030103023	7.75
5	2021-23	Vishal Kumar	21301223408	8.75



Best Practices of the Departments

- Avoiding the use of disposable cups.
- Switching off bulbs and ceiling fans after classes.
- Fostering character development among students.
- Encouraging students to use helmets while driving.
- Promoting awareness against tobacco use.
- Supporting the Swachh Bharat Abhiyan initiative.
- Tree plantation.



SWOC Analysis of the Department

Strengths

- Department offers both UG and PG courses to a huge no. of students.
- Smart class room for special classes and departmental seminars.
- Special classes for weak students.
- Special classes for PG students for preparation of exams like CSIR-NET and GATE.
- Provides study materials.



SWOC Analysis of the Department

Weakness

- Only one teaching staff.
- Departmental library facility is not sufficient.
- Research facility for computational research is not enough.
- Smart classrooms should be more.
- Classrooms should have microphone facility.



SWOC Analysis of the Department

Opportunities

- PG courses for UG students.
- Research facility.
- Library facility to poor students.
- Qualify in all India based MSc exam (JAM) for UG students.
- CSIR-NET and GATE for PG students.



SWOC Analysis of the Department

Challenges

- Completing of the whole syllabus.
- Not enough library facility.
- Lack of infrastructure.
- Smart classrooms.
- Weak internet facility for conducting online classes.



Future Plans of the Department

- Increase of teaching staffs.
- Sufficient Library facility to all the students.
- Special computer lab for computational research.
- Organize of programs to motivate the students for research.
- Conduct of Seminars, Conferences, Workshops.



**THANKING
YOU**

Department of Mathematics