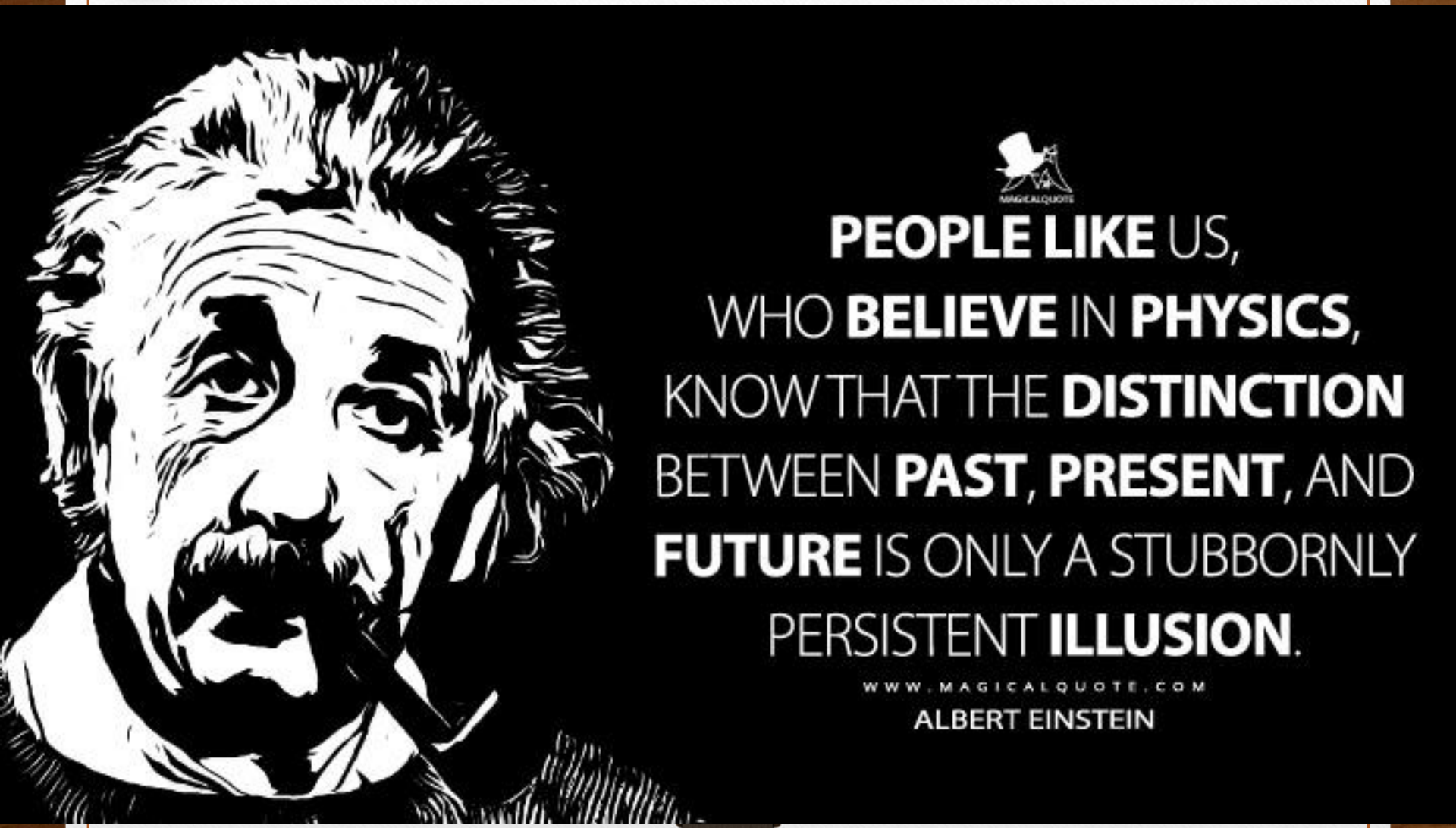
Welcome

NAAC
Peer Team Members
(19th September, 2024)

DEPARTMENT OF PHYSICS

SHANTI PRASAD JAIN COLLEGE, SASARAM


PEOPLE LIKE US,
WHO BELIEVE IN PHYSICS,
KNOW THAT THE DISTINCTION
BETWEEN PAST, PRESENT, AND
FUTURE IS ONLY A STUBBORNLY
PERSISTENT ILLUSION.
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Presentation

(19th September, 2024)

BY

Dr. Anuj Kumar

Department of Physics

Department of Physics

Dr.Anuj Kumar

Head of the Department

- Founded in 1950, the Department of Physics at Shanti Prasad Jain College Sasaram has been a pioneering force in undergraduate science education in our district.
- Renowned for our commitment to academic excellence, our students consistently achieve top ranks in university examinations.
- Our department boasts a rich legacy of inspiring faculty who cultivate a profound passion for science among our students. Physics serves as the cornerstone of the entire science curriculum, laying the foundation for major scientific advancements.
- Our objective is to impart high-quality education in physics, equipping students with the skills necessary for successful careers and further specialization in fields such as electronics, astrophysics, nuclear physics, atomic and molecular physics.
- Central to our success are our experienced and dedicated teachers, complemented by state-of-the-art laboratories that support advanced learning up to the honors level.

About the Department

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Our Vision

To impart state-of-the-art knowledge of physics to create competency and skills. “ To become a center of excellence in pure and applied physics”. Utilize and extend advance research facilities to support quality teaching and basic research thereby helping the department to grow as a center of excellence in science.

MISSION

The Physics Department is committed to impart quality education both in theoretical as well as experimental physics with special emphasis on ‘learning by doing’ for socio-economic growth. To produce quality students ready for teaching and research.

Name of the Department : Physics	
Particulars	**U.G**
Program offered System	CBCS System
Course offered	B.Sc. Physics
Course Approved Year	1952
Students Sanctioned Seat	200
Course Duration	4 Years
Current Academic Session	2023-27
Current Admitted Student	183

Faculty Strength

Designation	Sanctioned	Filled
Professors	06	Nil
Associate Professors		Nil
Assistant professor		Nil
Guest Faculty		02

Permanent Teacher - 00

Guest Teacher - 02

Total Full Time Teachers - 02

Permanent Teachers Profiles

Names	Qualification	Designation	Years of Experience	Total No. of Ph.D. Awarded

Guest Teacher Profiles

Name	Qualification	Designation	Years of Experience
Dr. Anuj Kumar	M.Sc. , Ph.D.	Guest Faculty	03
Dr. Shambhoo Nath Prabhakar	M.Sc. , Ph.D.	Guest Faculty	03

- Total No. of Staff – 01
- No. of Technical Staff – 00
- No. of Non-Technical Staff – 01

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

Program Outcomes

PO1: Professional knowledge: Acquire comprehensive knowledge of major concepts, theoretical principles and experimental findings of various subjects in pure sciences.

PO2: Critical thinking and Cognitive skills: Convey the intricate science information effectively and efficiently, analyze and solve the problems related to plants, animal sciences without relying on assumptions and guesses.

PO3: Environment and sustainability: Understand the impact of the scientific solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO4: Effective Communication: Demonstrate familiarity with and will be able to analyze both verbally and in writing issues and forms of contemporary art with a clear understanding of historical precedents.

PO5: Instruments and Experiments: Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments and drawing logical inferences from the scientific experiments.

PO6: Research and Analysis: Demonstrate analytical skill and proficiency in a range of tools and techniques used in research in science and interdisciplinary programmes.

PO7: Employability and higher Education: Show proficiency in professional, employability and develop soft skills required for higher education and placements.

PO8: Ethics: Imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality in the field of science.

PO9: 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.

PO10: 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.

PO11: 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 Specific Outcomes as Per V.K.S.U., Ara

Program Specific Outcomes

PSO1: Acquire fundamental knowledge in physics, including the major premises of classical mechanics, quantum mechanics, electromagnetic theory, electronics, optics, special theory of relativity and modern physics.

PSO2: Develop a written and oral communication skill in communicating physics-related topics.

PSO3: Design and conduct an experiment (or series of experiments) demonstrating their understanding of the scientific method and processes. Not only that they areexpected to have an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.

PSO4: Learn the applications of numerical techniques for modelling physical systems for which analytical methods are inappropriate or of limited utility.

PSO5: Develop an understanding of the impact of physics and science on society.

PSO6: Apply conceptual understanding of the physics to general real-world situations. Also, discover of physics concepts in other disciplines such as mathematics, computer science, engineering, and chemistry.

PSO7: Acquire awareness towards gender, environment, sustainability, human values, and professional ethics and understand the difference between acting, responding,reacting to various social issues.

Participation in various bodies

Total Number of Participation in various body :

Name of the Teacher	Participation in various body	No. of Participation in body
Dr. Anuj Kumar Dr. Shambhoo Nath Prabhakar	ICT ICT	01 01

Research & Publications

Books/Edited Volumes/Chapter During 2017-18 till Date

	Name of the Teacher	Title of the Books/Edited Volumes/Chapter	Year of Publications
1.	Dr. Anuj Kumar	**Sodh – Sanchyan,** Role Of Nano-technology In The Field Of Global Warming	2023
2.	Dr. Shambhoo Nath Prabhakar	**Sodh – Sanchyan,** Ginzburg Land All Theory Of Type Super Conductor In Every Magnetic Field	2023

Research & Publications

Journals/Conferences/Seminars

During 2018-19 to 2023-24

Sl.No	Name of the Teacher	Total No. of Article/Research Paper	Total No. of Paper in National/International conference
1.	Dr. Anuj Kumar	02 (National), 01 (International) Article, 01 Research Paper	03
2.	Dr. Shambhoo Nath Prabhakar	05 (International) Article, 04 Research Paper	03

Our Faculties Participation in Refresher/Orientation/FDP

Name of the Teacher	Total No. of Refreshers	Total no. of Orientation	Total No. of FDP/Workshop
Dr. ANUJ KUMAR	----	-----	02
Dr. SHAMBHOO NATH PRABHAKAR	----	-----	02

Academic Activities Conducted by the Department

Title of Program/Activities	Date	Details of Recourse Person
LASER, A Theuretician's Approach	05-08-2023	Dr. Awadesh Prasad H.O.D V.K.S.U, ARA
God Particle – Past Present and Future	11-03-2024	Dr. S.P. Tiwari Retd. H.O.D V.K.S.U, ARA

Photographs of Academic Activities Conducted by the Department

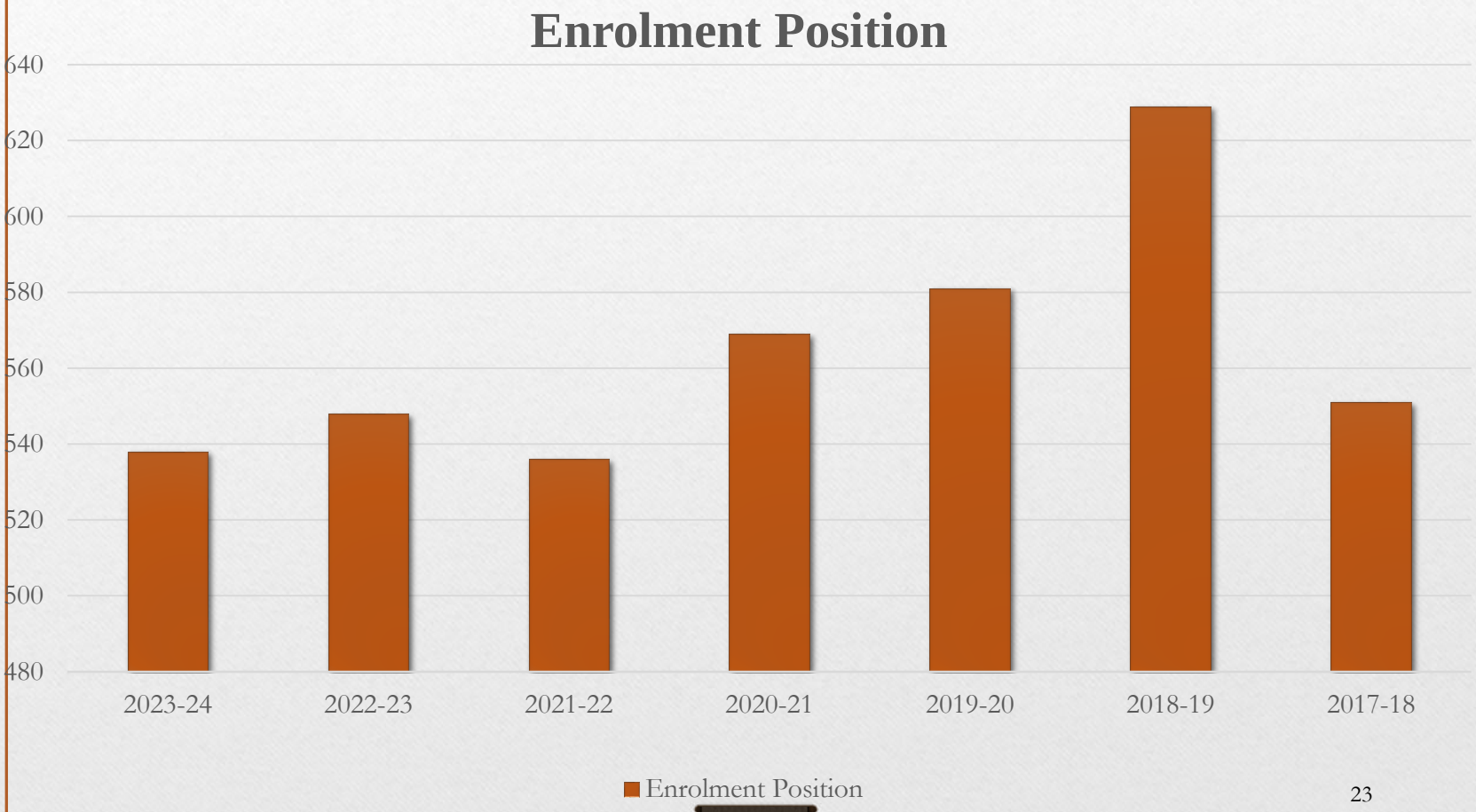
Photographs of Academic Activities Conducted by the Department

Students actively participated in Interactive Smart Classroom

Enrolment Position in U.G Programme
Session - 2017-18 to 2023-24

Session / Year	Part -I	Part -II	Part -III	Total
2023-24	183	175	180	538
2022-23	200	168	180	548
2021-22	168	178	190	536
2020-21	181	190	198	569
2019-20	200	201	180	581
2018-19	247	176	206	629
2017-18	176	206	169	551

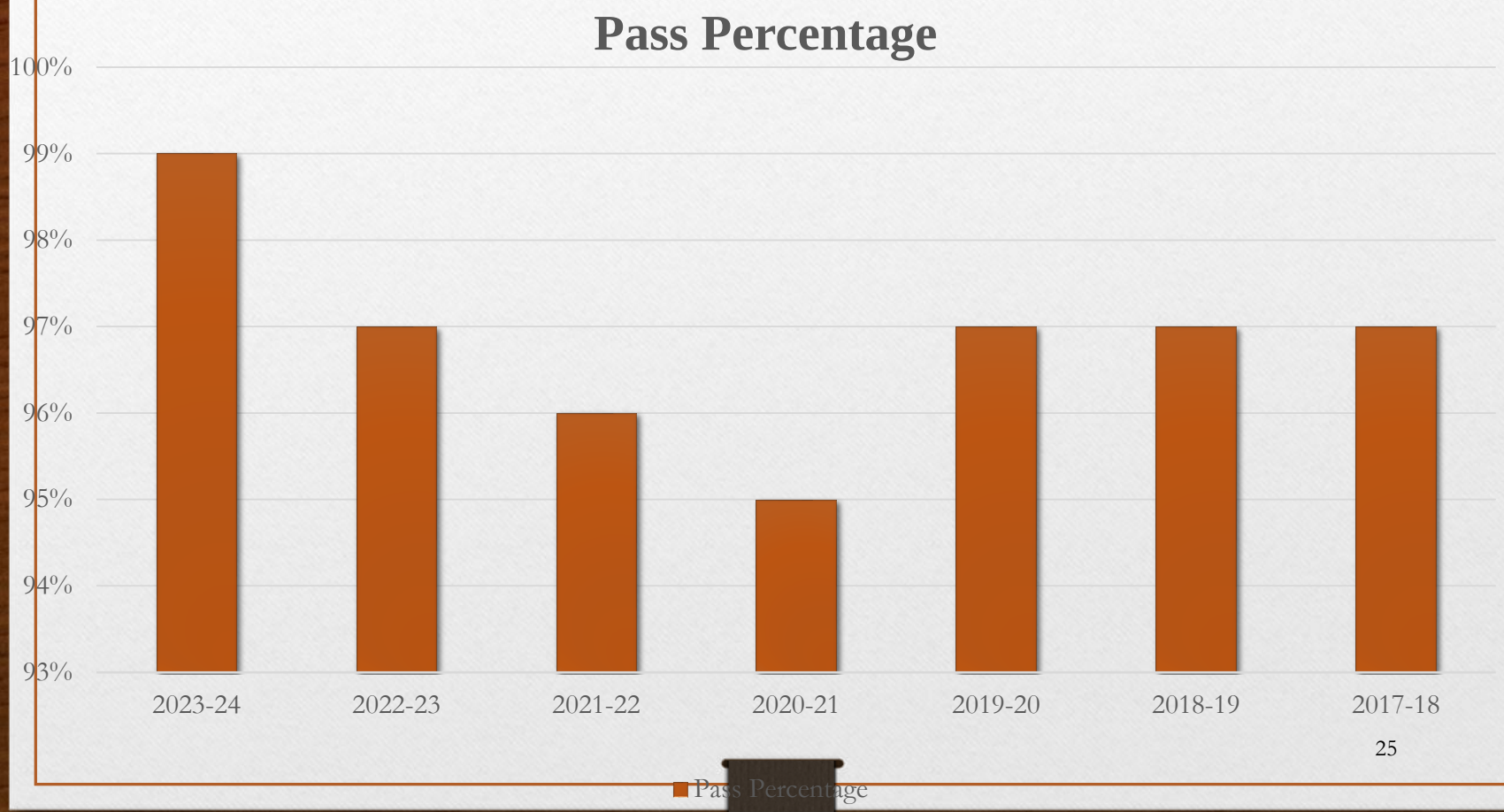
Enrolment Position in U.G Programme
Session - 2017-18 to 2023-24



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	176	175	99%
2022-23	176	172	97%
2021-22	190	184	96%
2020-21	198	190	95%
2019-20	180	176	97%
2018-19	200	194	97%
2017-18	169	165	97%

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



Enrolment Position in Current Session
Session – 2023-24

Session / Year 2023-24	U.G	
	Male	Female
Part I/Sem I	140	43
Part II/ Sem-III	122	43
Part III	133	47
Total	395	133
Total (M+F)	528	
Grand Total (U.G & P.G)		

DEPARTMENT OF PHYSICS

PHOTOGRAPHS

Participation in Seminar/Conference & Symposia

Name of Teacher	Total no. of Participation in National Seminar/Conference & Symposia	Total no. of Participation in International Seminar/Conference & Symposia
Dr. Anuj Kumar	02	01
Dr. Shambhoo Nath Prabhakar	02	01

Outstanding Achievement

1. To impart in depth knowledge.
2. To develop capability to relate and use the acquired knowledge of Physics in real life.
3. To organize out reach activities to promote scientific culture.

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

Sl. No.	Session	Name of the Students	University Roll. No	Pass Percentage
1	2019-2022	Ankit	193010501025	76%
2	2020-2023	Priya Pandey	203010501106	79%
3	2021-24	Sapna Mehta	213011105035	80%

Best Practices of the Departments

Skill Enhancement:

- Teachers encourage students to improve their skills.
- Emphasis on thoroughly understanding the fundamentals of Physics to achieve higher marks.

Research and Excellence:

- Physics department advises B.Sc. Part-III students to engage in research work.
- Encouragement to strive for excellence and contribute significantly to the field of science.

Hands-On Learning:

- Lab technicians and teachers motivate students to work with experimental devices. Focus on fostering a hands-on approach to learning and discovery.

SWOC Analysis of the Department

Strength

- **U.G. Courses Under Semester CBCS Curriculum**
- **Well established labs.**
- **Smart Class**
- **Special Classes for weak students.**
- **Large no. of Students in higher education**

SWOC Analysis of the Department

Weakness

- P.G. Course not available.
- Scarcity of Teaching and Non -Teaching Staffs.
- Research Lab and Library to be enriched.
- Labs requires instruments.
- More smart classes required.

SWOC Analysis of the Department

Opportunities:

- P.G. Courses.
- Research Lab Facility.
- Library Facility.
- Library Facility to poor students.
- Online Classrooms facility to U.G. Students.

SWOC Analysis of the Department

Challenges:

- Poor Students teacher ratio
- Infrastructure
- Less Class rooms
- Smart Class rooms
- Weak Internet Facility

Future Plan of the Department

- Better student teacher ratio
- More research instruments
- Conducting Seminars , Conference and Workshop.
- Special research lab

Department of Physics