WARM WELCOME TO PEER TEAM MEMBERS OF NAAC

MAHAMAYEE MAHILA MAHAVIDYALAYA

DEPARTMENT OF PHYSICS

ABOUT THE DEPARTMENT

- The Physics department of Mahamayee Mahila Mahavidyalaya was established in the year 1999.
- It is a specialized department that caters to B.Sc(H) Physics and is continuously upgrading itself according to the changing curriculum from Annual to Semester CBCS pattern.
- It is a matter of great achievement that our students are getting placement in Schools, Colleges, Polytechnics, Public & Private Sectors.
- The department finds the ways to motivate the talented students to focus on standards, assessment and outcomes to reach greater heights.

VISION

- The Physics department is committed to impart quality education both in theoretical as well as experimental physics to disseminate the physics knowledge to coming generations.
- So that our physics graduates service students are successful in a wide range of career path.

MISSION

- The mission of the department of physics is to explore the young minds and to provide high quality education to complete them globally.
- To explore innovative capabilities of students by providing them sound curricular foundation, covering an array of topics to develop a conceptual understanding of basic principles, applications.
- To support the developmental activities of the college and make the department ornamental & vibrant.
- To organize & sustain efficient operating system for realizing eminence of the department.
- To develop numerous strategy in the department for continuous improvement.

IMPORTANCE OF THE DEPARTMENT

- ✓ Physics department is a specialized department that is indispensable in a institution of higher learning.
- ✓ Studying physics can be rewarding and intellectually stimulating experience for those who have a passion for the subject.
- ✓ Physics is considered as a foundational science provides a strong basics for understanding the natural phenomenon.
- ✓ The well equipped laboratory & department library brings a consistency in academic results

OBJECTIVES OF THE DEPARTMENT

- To make Physics department become centre of excellence and source of reference for physics; providing broad spectrum of physics courses.
- To produce high quality graduates in the field of physics to enhance professionalism.
- To strengthen relations & links with research institution, educational institution and industry related in fields of physics.

FACULTY PROFILE

PERSONAL INFORMATION:

Ms. Reeta Kumari Choudhury,
H.O.D of Physics

Experience:

- 2000 – Present
- Lecturer in Physics
- Department of Physics
- Mahamayee Mahila Mahavidyalaya
- Berhampur (Ganjam) Odisha

Qualification:

- 2000 – M.Phil
- Berhampur University
- **Research Publication (04)**
- www.ijarcsse.com (2) www.ijarcsse.com (3) www.ijesc.com (4) www.ijraset.com

PERSONAL INFORMATION:

Mrs. Kashmira Dash,
Laboratory Assistant in Physics
Qualification: B.Sc.

SWOC ANALYSIS

STRENGTH

1. Highly qualified and experienced faculty members.
2. There is always a friendly and coordial relation between the teachers and students in the department.
3. Growing enrollment in the department.

WEAKNESS

1. Lack of well equipped department with mordern facilities like:- LCD projector, computers.
2. Extension & enlargement of laboratory.

OPPORTUNITIES

1. Students guided by faculty members of higher degree and motivated to appear NET, SLET & other competitive exam.
2. Students show their potential and knowledge through seminars & project works.

CHALLENGES

1. Student- teacher ratio is exceptionally high.
2. To teach and conduct practical classes for the students with poor foundation.

PROGRAMME OUTCOMES
B.SC (PHYSICS)

- To gain a comprehensive and deep understanding of core physics concepts across various fields as Classical Mechanics, Quantum Mechanics, Solid State Physics, Digital Application, Statistical Mechanics, Nuclear and Particle Physics, Electromagnetic Theory.
- Able to develop critical thinking & to analyse complex physical phenomenon, then applying theoretical concepts to practical through different tools.

COURSE OUTCOMES

CORE COURSES

Core courses	Course Outcomes
CC – 1 Mathematical Physics - I	To acquire knowledge of divergence, curl, gradient vector fields & its application to calculus.
CC – 2 Mechanics	To understand laws of motion, rotational dynamics, planetary motion.
CC – 3 Electricity and Magnetism	To know about basic concepts of electrical currents, dielectrics, network theorems & magnetism.
CC – 4 Waves and Optics	To learn about waves & propagation, understanding physical & geometrical optics.
CC – 5 Mathematical Physics - II	Solving Fourier Series, differential equation (Forbenius method) Learning functions & properties & its application.
CC – 6 Thermal Physics	To understand the basic principle of thermodynamics, entropy .
CC – 7 Analog Systems and Applications	To know about Semiconductor diodes & it's application, Transistors, Amplifiers & it's

	classification.
CC – 8 Mathematical Physics - III	Understanding complex analysis, Fourier transform, convolution theorem.
CC – 9 Elements of Modern Physics	To explore about inadequacy of classical mechanics, concepts of Schrodinger equation and application.
CC – 10 Digital Systems and Applications	To learn about Boolean Algebra, different logic gates, truth table, K-map, CRO & application.
CC – 11 Quantum Mechanics and Applications	Understanding Schrodinger equation and application, operator formalism.
CC – 12 Solid State Physics	Understanding crystal structure, lattice dynamics, superconductivity.
CC – 13 Electromagnetic theory	Understanding Maxwell's equation in time varying fields.
CC – 14 Statistical Mechanics	To understand statistical properties of matter related to thermodynamics, classical & quantum approach.

DISCIPLINE SPECIFIC ELECTIVE (DSE)

DSE Subjects	Course Outcomes
DSE – I Classical Dynamics	To know about generalized coordinates, Lagrange's equation & applications, Hamilton's equation, special theory of relativity.
DSE – II Nuclear and Particle Physics	To gather knowledge about properties of nucleus, nuclear models, classification of elementary particles.
DSE – III Nano Materials and Application	To understand Nano scale System, its synthesis, characterization & applications.
DSE – IV Project	Students acquire advanced knowledge doing a project work with an advisory support by faculty member, enhancing their skill, employability & entrepreneurship.

PRACTICAL / LAB

Practical Topics	Course Outcomes
C-2, C-3, C-4, C-6, C-7, C-9, C-10, C-12, C-13, (LAB) Practical of Mechanics, Thermodynamics, Electricity & Magnetism, Waves, Optics, Modern Physics, Solid State Physics.	1. Students learned the theories verified in practical classes.
C-1, C-5, C-8, C-11, C-14, (LAB) Practical's based on computation and programming (C, C^{++}, Sci. Lab)	1. Students learn how to write algorithm, iteration techniques, plotting different types of graphs.

ADMISSION ANALYSIS (LAST 5 YEARS)

YEAR	SANCTIONED STRENGTH	NO. OF STUDENTS
		1st Sem
2019-2020	56	51
2020-2021	56	41
2021-2022	56	38
2022-2023	56	36
2023-2024	56	38

RESULT ANALYSIS (LAST 5 YEARS)

Year	Total no. of students appeared	Passed
2019-2020	38	35
2020-2021	44	37
2021-2022	47	29
2022-2023	46	27
2023-2024	37	

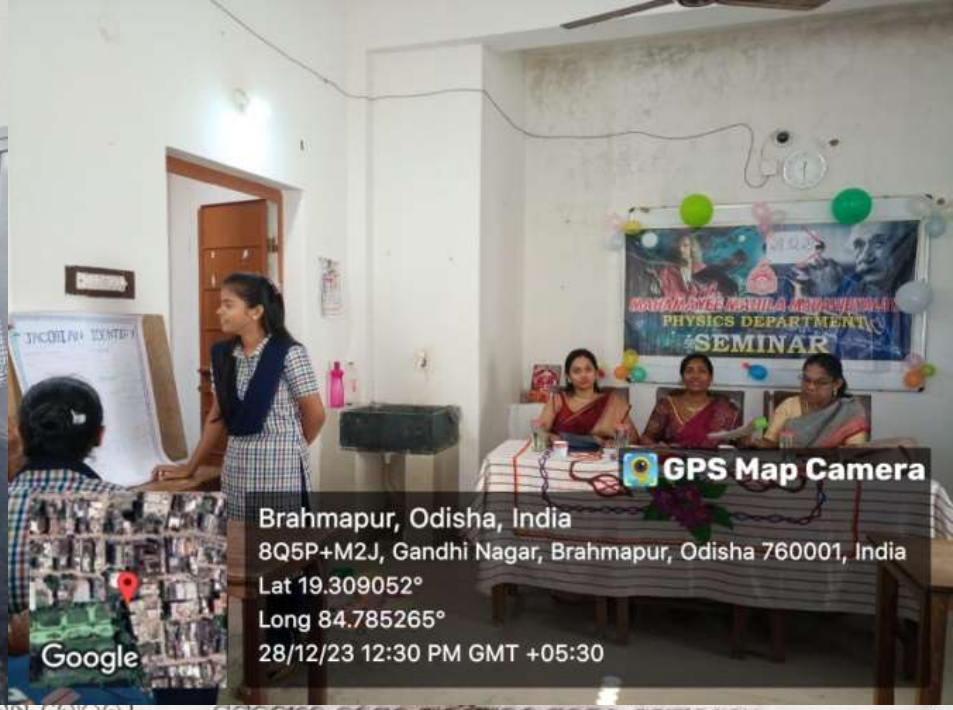
DEPARTMENT ACTIVITIES

SEMINARS

Sl.No.	Date	Topic	Class
1.	29.10.2019	Relativistic Doppler effect, LASER & its application	5th Semester
2.	06.11.2019	CRO & its application, Entropy	3rd Semester
3.	18.11.2019	Entropy, Introduction to computer organization, Ideal gas	3rd Semester
4.	13.12.2019	Forced Oscillation, Launching of Satellite	1st Semester

5.	11.02.2020	Maxwell Boltzmann Distribution Law, Weins Law, Optical Fibre	6th Semester
6.	19.02.2020	X-Ray Diffraction, Polarisation & application, Nano Particle	6th Semester
7.	23.03.2021	Transistor	3rd Semester
8.	16.03.2022	OPAMP & its application, RC coupled Amplifier, Entropy	3rd Semester
9.	23.03.2022	Liquid drop model, Weins Theory, Time Independent Schrodinger Equation	5th Semester
10.	07.09.2022	Capacitance by Mirror image, Wave motion	2nd Semester
11.	30.11.2022	Radioactivity, Magic numbers	5th Semester
12.	27.02.2023	$E = mc^2$, Lorentz Transformation Equation, Moment of Inertia	2nd Semester

13.	29.09.2023	Radioactivity, β - Decay, Classification of Elementary particles	5th Semester
14.	12.10.2023	Q.Mech & application, Hamilton's Equation	5th Semester
15.	31.10.2023	Relativistic addition of velocity, Lorenz Transformation	1st Semester
16.	28.12.2023	Time dialation, Application of M.I, Rigid body motion	1st Semester
17.	28.03.2024	Characterisation of Nano materials, Synthesis of Nano particles	6th Semester



ମହାମାୟୀ କଲେଜ ପଦାର୍ଥ ବିଜ୍ଞାନ ଆଲୋଚନାଚକ୍ର

ବ୍ରହ୍ମପୁର,୧।୩(ବ୍ୟୁରୋ): ମହାମାୟୀ ମହିଳା ମହାବିଦ୍ୟାଳୟ ପଦାର୍ଥ ବିଜ୍ଞାନ ବିଭାଗରେ ସୋମବାର ଆଲୋଚନାଚକ୍ର ହୋଇଯାଇଛି । ଅଧ୍ୟକ୍ଷ ଡ. ଏସ୍. ନାରାୟଣ ରାଓଙ୍କ ଅନୁମତିକ୍ରମେ ପ୍ରଥମ ବର୍ଷ ଛାତ୍ରୀ ଏହାର ଆୟୋଜନ କରିଥିଲେ । ବିଭାଗୀୟ ମୁଖ୍ୟ ରୀତା ଚୌଧୁରୀଙ୍କ ତତ୍ତ୍ୱାବଧାନରେ ଅତିଥି ଓ ଛାତ୍ରୀମାନେ 'ମୋମେଣ୍ଟ ଅଫ୍ ଇନର୍ସିଆ, ଗ୍ରାଭିଟେସ୍‌ନାଲ ପୋଟେନ୍‌ସିଆଲ ଏନର୍ଜି ଓ ଲରେଞ୍ଜ୍ ଟ୍ରାନ୍ସଫର୍ମେସନ' ଶୀର୍ଷକରେ ମତ ଉପସ୍ଥାପନ କରିଥିଲେ । ଡେମୋନ୍‌ଷ୍ଟ୍ରେଟର୍ ସଂଯୁକ୍ତା ସାହୁ, କାଶ୍ମୀରା ଦାଶ ଏବଂ ଛାତ୍ରୀମାନେ ଆଲୋଚନାଚକ୍ର ପରିଚାଳନାରେ ସହଯୋଗ କରିଥିଲେ ।

ପଦାର୍ଥ ବିଜ୍ଞାନ ଛାତ୍ରୀଙ୍କ ପାଠଚକ୍ର

ବ୍ରହ୍ମପୁର,୭ ।୯(ସ.ପ୍ର.) ସ୍ଥାନୀୟ ମହାମାୟା ମହିଳା ମହାବିଦ୍ୟାଳୟ ପଦାର୍ଥ ବିଜ୍ଞାନ ବିଭାଗ ଦ୍ୱିତୀୟ ସେମିଷ୍ଟାର ଛାତ୍ରୀଙ୍କ ତରଫରୁ ଏକ ପାଠଚକ୍ର ଆୟୋଜିତ ହୋଇଯାଇଛି । ମହାବିଦ୍ୟାଳୟ ଅଧ୍ୟକ୍ଷ ଡ. ଏସ୍. ନାରାୟଣ ରାଓଙ୍କ ସଭାପତିତ୍ୱରେ ଏହା ଅନୁଷ୍ଠିତ ହୋଇଥିଲା । ବିଭାଗୀୟ ମୁଖ୍ୟା ଗୀତା ଚୌଧୁରୀଙ୍କ ତତ୍ତ୍ୱାବଧାନରେ ହୋଇଥିବା ଆଲୋଚନାଚକ୍ରରେ ଛାତ୍ରୀମାନେ ଯୋଗ ଦେଇଥିଲେ । ପ୍ରାଧାପିକା ଡ. ପ୍ରତିଭା ପାଣିଗ୍ରାହୀ ମୁଖ୍ୟଅତିଥି ଭାବରେ ଯୋଗ ଦେଇ ପାଠ୍ୟଚକ୍ର 'ୱେଭ୍ ମୋସନ' ଓ 'କାପିଟାନ୍ସ ବାଏ ମିରର ଇମେଜେସ୍' ଉପରେ ଆଲୋକପାତ କରିଥିଲେ । ଡ଼େମୋନଷ୍ଟ୍ରେଟର ସଂଯୁକ୍ତା ସାହୁ ଓ ଛାତ୍ରୀ ସହଯୋଗ କରିଥିଲେ ।


PHYSICS DEPARTMENT
SEMINAR
GPS Map Camera
Brahmapur, Odisha, India
8Q5P+M2J, Gandhi Nagar, Brahmapur, Odisha 760001, India
Lat 19.309067°
Long 84.785221°
13/07/24 01:24 PM GMT +05:30
Google


GPS Map Camera
Brahmapur, Odisha, India
8Q5P+M2J, Gandhi Nagar, Brahmapur, Odisha 760001, India
Lat 19.309067°
Long 84.785224°
13/07/24 01:07 PM GMT +05:30
Google

Extra Curricular Activities:

Study Tour (1)

Parala Maharaja Engineering College

25.01.2020 (40 students)

Study Tour (2)

NIST, Berhampur

NATIONAL SCIENCE DAY AT NIST

28.02.2023 (ATTENDED BY 5TH SEMESTER STUDENTS)

STUDENTS ALUMNI

Sl. No.	Name of the Student	Roll No.	Mobile No.	Higher Study/ Placement
1	Reshma Nayak	BS-18-051	9937084720	PG (NIST)
2	Damini Sethi	BS-20-025	9558413654	PG (NIST)
3	Suchismita Kundu	BS-20-083	7847070242	PG (NIST)
4	Mousumi Tripathy	BS-19-087	9078146626	PEO, Gajapati
6	Bishnupriya Dash	BS-20-111		

NEP IMPLEMENTATION

- Encoraging students to be interprenears & develop startup ideas.
- Targeting the students to achieve individual goals.
- Promotes interdisplinary lerning.
- Reforming existing exam system , encouraging creative & critical thinking aliging education with industry than enhancing employability.


PHYSICS DEPARTMENT
GPS Map Camera
Brahmapur, Odisha, India
Building, 1st Ln, Gandhi Nagar Brahmapur, Odisha 760001, India
Lat 19.309393°
Long 84.785526°
07/10/24 12:58 PM GMT +05:30
Google


GPS Map Camera
Brahmapur, Odisha, India
Building, 1st Ln, Gandhi Nagar Brahmapur, Odisha 760001, India
Lat 19.309393°
Long 84.785526°
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Google

FUTURE PLAN OF THE DEPARTMENT

- # DEVELOPMENT OF EXCELLENT LABORATORIES TO SET QUALITY EDUCATORS
- # TO START POST – GRADUATE COURSE
- # TO ENHANCE THE IMPACT OF RESEARCH ACCOMPLISHMENT AND CURRENT ACTIVITY IN PHYSICS DEPARTMENT
- # TO ORGANISE NATIONAL CONFERENCES & WORKSHOPS.


THANK
YOU