

Shri Shivaji Arts, Commerce and Science College,

Motala, Dist. Buldana

Department of Physics

Inception of Department:

The college was established in the year 1990 with two faculties viz. arts and commerce. Faculty of Science came into existence in the academic session 2009-10 on non-grant basis. Department of Physics got established in the same session. The department continued to function with teachers being appointed on clock hour basis. Science faculty drew a lot of students from semi-urban/ rural background to the college enhancing the enrollment in the college.

Progression of the department:

The science faculty received grants from the state government in the beginning of the year 2013. Physics department along with other science departments had a great scope to prosper because of this. Full-time teaching staff got inducted into the department in the year 2019 streamlining the chores. Mr. V.R. Hiranwale occupied the chair of Head. Mr. D. B. Chanekar, Mr. P.A. Bramhankar, Dr. S.S. Behere, Mr. P.M. Gaiki, Mr. R.S. Bankar became his colleagues.

Current Status:

At present, Mr. D.B. Chanekar heads the department of Physics with a skilled, qualified and energetic team of total five faculty members. Dr. Ashish R. Choudhary joined the college on transfer and Mr. Bankar, Mr. Hiranwale got transferred to society's other college. The department has well equipped laboratories. The faculty of department uses advanced teaching techniques besides ICT. Numerous students excel in the examinations conducted by the SGBAU, Amravati. The alumni of the department are pursuing higher education in various other institutes of repute. Few of them are placed in notable institutions, organizations, enterprises; entrepreneurship being the other virtue.

Remarkable features:

Designing of indigenous laboratory apparatus, Engagement of virtual labs, e- academic management system, Remedial coaching of slow learners, Advance-learners teaching scheme.

VISION

Department of physics defines its mission in the context of academic excellence, scientific rigor, and scientific integrity. Our primary responsibility is to prepare undergraduate students for careers in physics and technical fields. In light of the fact that physics is a bridge between technology and society, department of physics is committed to bringing an understanding of

physics and science to the general students. Our purpose is to inspire and educate our students to become autonomous thinkers and active citizens.

LEARNING OBJECTIVES

- **Knowledge**
Physics majors will be conversant with the major ideas and techniques of classical and modern physics.
- **Skills**
Physics majors will become proficient in mathematics, laboratory, and computer skills and problem solving.
- **Communication**
Physics majors will communicate their knowledge in written reports and oral and poster presentations.
- **Research**
Physics majors will contribute to the knowledge base of physics through research.
- **Careers**
Physics graduates will be able to begin physics-related careers in teaching, industry, or research.

Year of Establishment: UG – 2009

1. Faculty profile, adequacy and competency of faculty:

Sr. No.	Name of the faculty member	Educational Qualification	Designation	Teaching Experience
1.	Mr. D.B. Channekar	M.Sc. (Physics), NET	Assistant Professor & Head	2 years
2.	Dr. Ashish R. Choudhary	M.Sc. (Physics), B. Ed., Ph.D.	Assistant Professor	16 years
3.	Mr.P.A. Bramhankar	M.Sc. (Physics), SET, GATE	Assistant Professor	2 years
4.	Dr. Supriya S. Behere	M.Sc. (Physics), Ph.D.	Assistant Professor	2 years
5.	Mr. Pratik M. Gaiki	M.Sc. (Physics), NET, SET, GATE	Assistant Professor	5 years

2. Data Pertaining to Students:

Sr. No.	Year	B.Sc.I	B.Sc.II	B.Sc.III	Total Strength
1.	2017-18	82	84	71	237
2.	2018-19	77	76	73	226
3.	2019-20	68	64	60	192
4.	2020-21	60	60	64	184

3. Result Analysis:

Programme	2015-16	2016-17	2017-18	2018-19	2019-20
B.Sc.-I	63.23%	82.14%	79.01%	18.05%	100%
B.Sc.-II	50%	56.33%	19.51%	71.92%	96.55%
B.Sc.-III	76.66%	88.67%	41.42%	54.05%	93.22%

4. Details of Ongoing Minor Research Projects completed: Nil

5. Certificate courses accomplished:

- a) Digital Electronics (2019-20) b) Renewable energy (2020-21)

6. Event Gallery:

a) Physics Society Inauguration and National Science Day Celebration:



A student delivering speech.



Introduction of dignitaries.

**b) Certificate
Digital Electronics**

Course in Physics:



Mr. Dhiraj B. Chanekar guiding students.



Students being attentive.



Mr. Pratik M. Gaiki guiding students.



Mr. Parag A. Bramhankar enlightening students.

c) Industrial Visit to MSEDCL Substation, Motala



Physics staff with Respected Principal sir and students.



Physics staff with students at the substation.



Students interacting with the officers at the substation.



A substation officer demonstrating.

d) In-college Convocation Ceremony:



Students posing with their degrees along with staff.



Students that took part in the **11th Indian Student Council** displaying their certificates.



Teaching staff with Dr. Palhade, Asst.Prof., Dept. of Physics of Shri Shivaji College, Akola.

7.

Learning resources of Department (Laboratories, Computers/Internet/Departmental Library etc.)

- Departmental Laboratory: Well-equipped Laboratory for U.G.
- Computers/ Internet—One desktop System with broadband connectivity.
- Departmental library with useful reference books.

8. Enhancement of the resources

- Internet and audio-visual facilities are added during this period.
- Separate room for departmental library and Internet has been made available for the faculty.
- Study tours are conducted every year to visit industries to make the students aware of the developments occurring in the present-day environment.
- Guest Lectures of renowned speakers and teachers in fields related to physical sciences under Physical Society.

9. Modern teaching methods

The faculty members actively make use of audio-visual aids like Google Meet, You-tube, Google Classroom and Zoom to make the teaching learning process more effective. Along with books the faculty members also make use of internet in upgradation of their teaching material. With the modern audio-visual aids, the faculty members make use of models and charts in the process of teaching. The college also has two ICT enabled classrooms. To make the teaching learning process more efficient the students are encouraged to deliver seminars and participate in group discussion, quiz competitions etc.

Video Lecture Links:

Mr. Dhiraj B. Channekar

<https://youtu.be/BNJIsrF1hy8>

<https://youtu.be/AdBz11StJu4>

<https://youtu.be/3-DPswDewUI>

By Mr. Pratik M. Gaiki

<https://youtu.be/AfZWzEmUhSg>

<https://youtu.be/qxnHio7qinQ>

<https://youtu.be/8RTeSJK0Vg8>

By Dr. Ashish.R. Choudhary

<https://youtu.be/NnNMKJLOHbc>

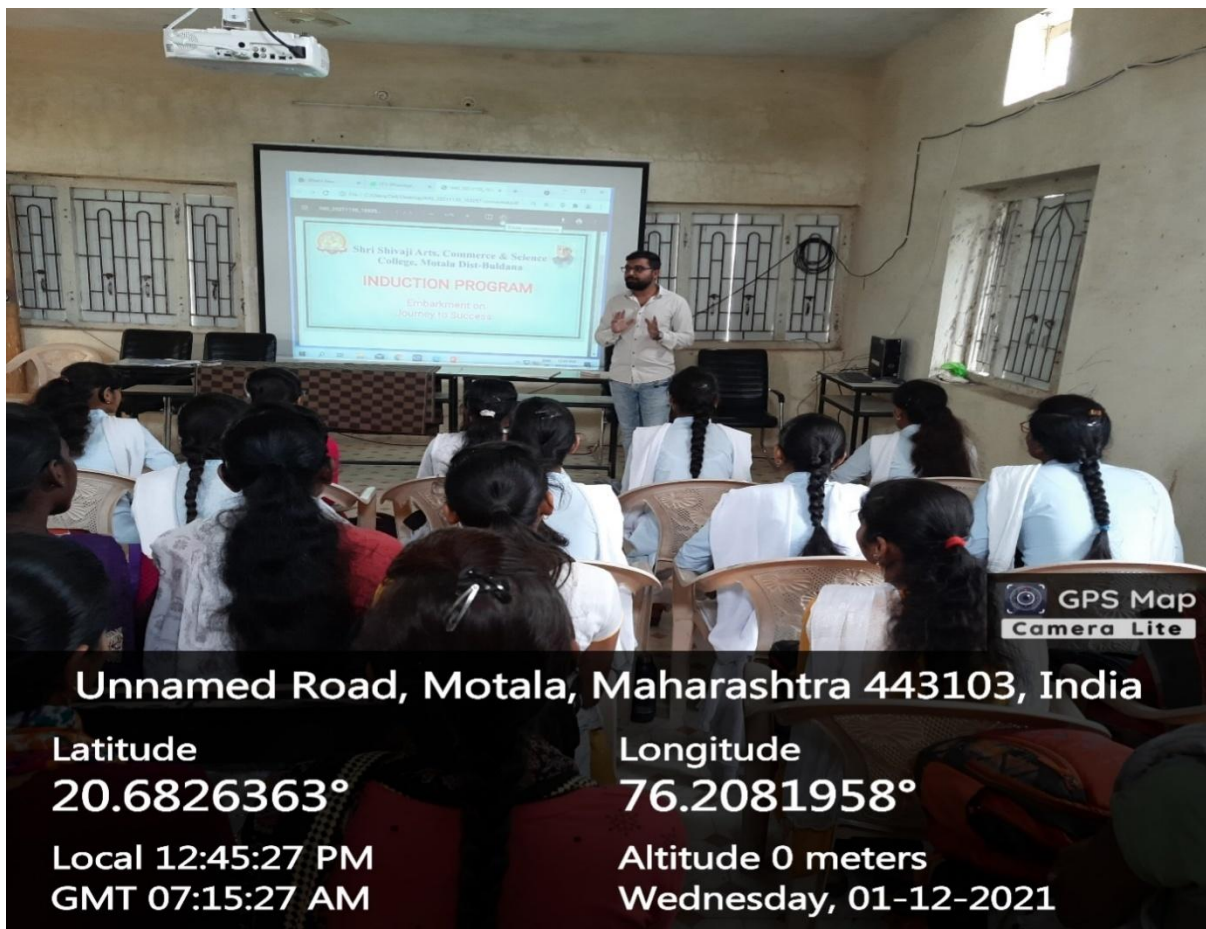
https://youtu.be/_ki_OsLw8_8

<https://youtu.be/gLUEPE9o6uE>

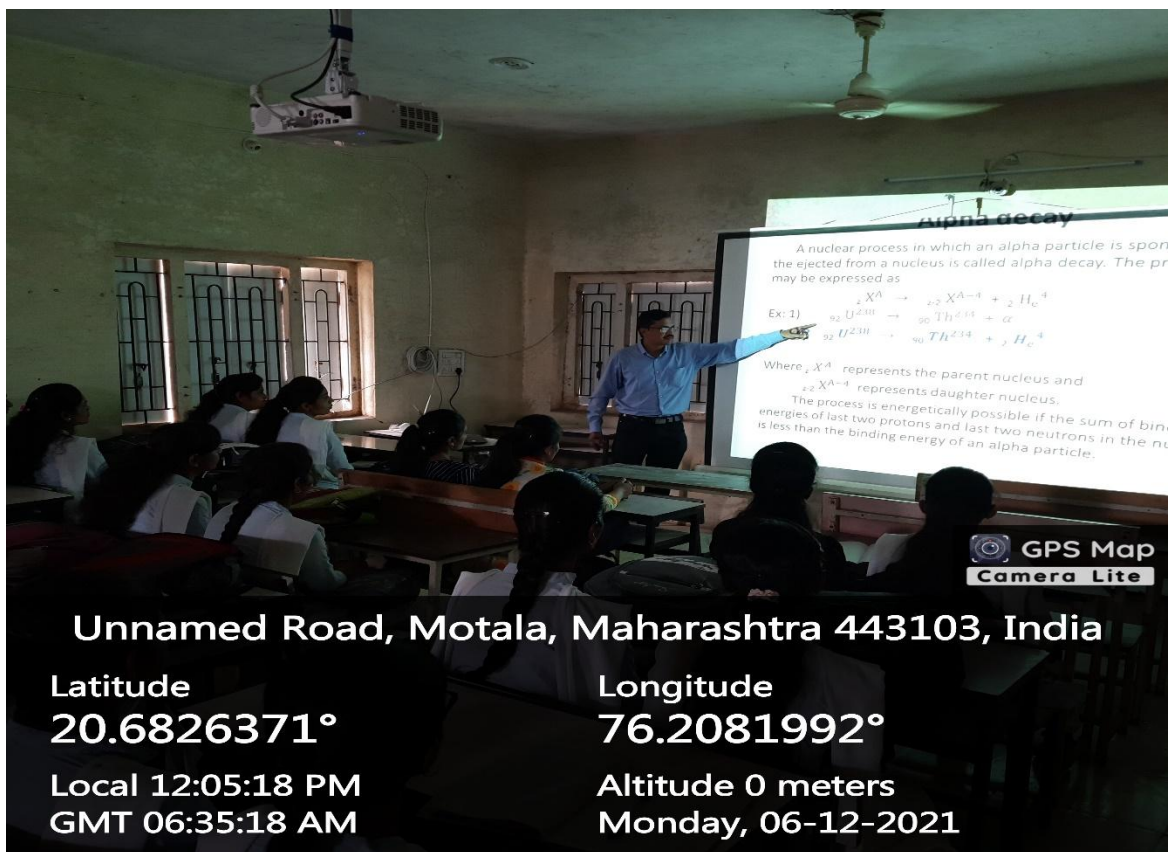
<https://youtu.be/OoY6uW92DM8>

<https://youtu.be/bysbwtY6ozY>

<https://youtu.be/PurnLkfq11c>



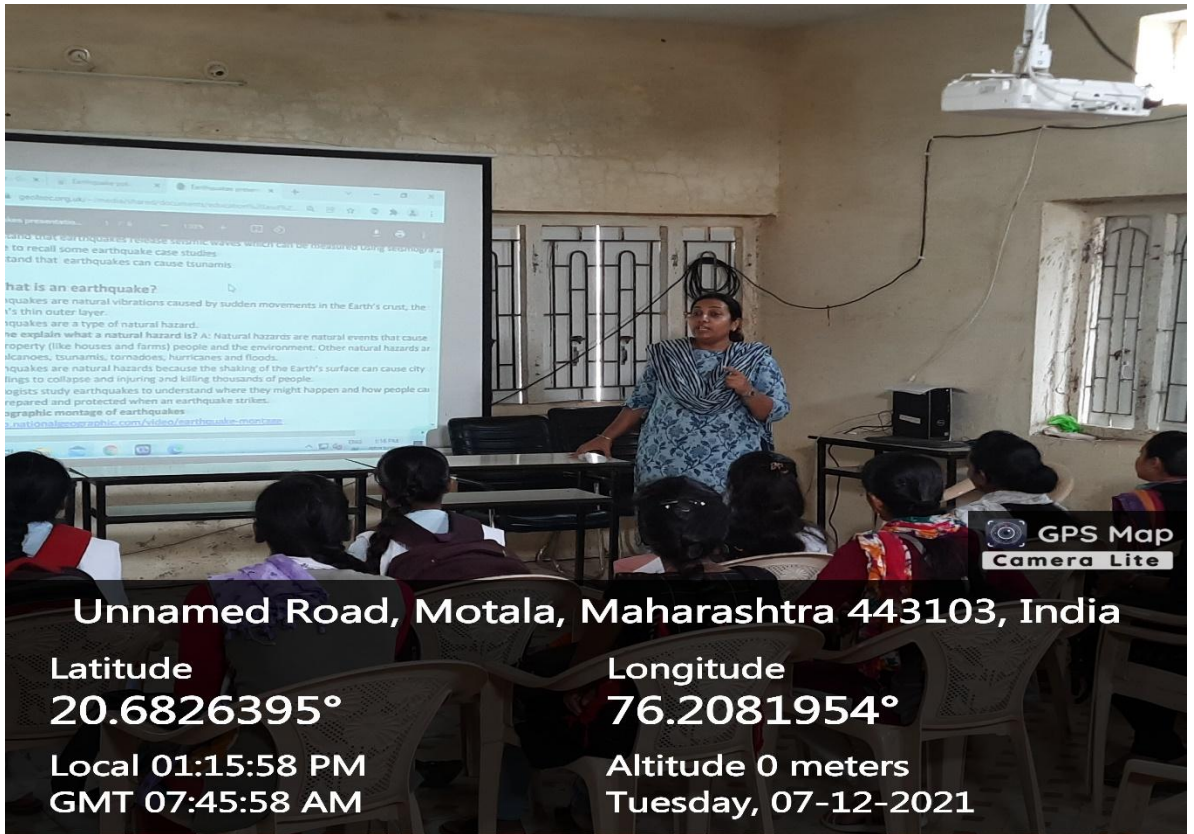
Mr. Dhiraj B. Channekar guiding the students.



Dr. Ashish R. Choudhary delivering his lecture.



Mr. Pratik M. Gaiki discussing a topic with students.



Unnamed Road, Motala, Maharashtra 443103, India

Latitude
20.6826395°

Longitude
76.2081954°

Local 01:15:58 PM
GMT 07:45:58 AM

Altitude 0 meters
Tuesday, 07-12-2021

Dr. Supriya S. Behere detailing about the chapter.



Unnamed Road, Motala, Maharashtra 443103, India

Latitude
20.68259877°

Longitude
76.20821798°

Local 12:45:06 PM
GMT 07:15:06 AM

Altitude 235.97 meters
Tuesday, 07-12-2021

Mr. Parag A. Bramhankar sharing his knowledge with students.

10. Collaborations:

The Physics Department of Shri Shivaji Arts, Commerce and Science College, Motala has signed a Memorandum of Understanding (MoU) with Department of Physics Shri Shivaji Arts, Commerce and Science, College, Akot on July 2021.

Under the active MoU Shri Shivaji Arts, Commerce and Science College, Motala organized faculty members' guest lectures of Shivaji Arts, Commerce and Science, College, Akot on August 30, 2021. Dr. Shrikant Nimkar and Dr. Poonam Farode delivered their talks to students of Shri Shivaji Arts Commerce and Science College, Motala.

11.

Participation of teachers in academic activities other than teaching and research.

The teachers participate in co-curricular and extra-curricular activities in the department and in the college. The Department has Physical Society, under the aegis of which guest lectures, study tours, cultural programs are conducted.

12. Participation of the department in extension activities

Department conducts a wide range of social and community service initiatives. There are large number of activities undertaken by the students and staff for the benefit of community. These activities are need based. The department has MoUs with different colleges.

13. Action Plan for next five years:

- Laboratory infrastructure upgradation.
- Updating Teaching and Research facilities in the department.
- To increase the number of books and journals in departmental library and subscribe-