



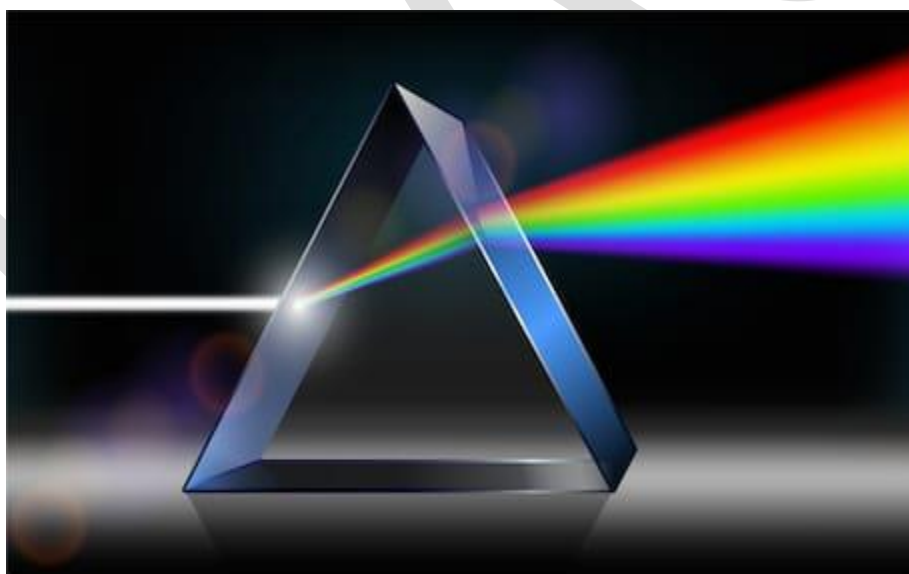
S.B.V.P.SAMAJ'S

**Sahakar Maharshi Bhausaheb Santuji Thorat College Of Arts , Science And
Commerce , Sangamner 422605 Dist :- Ahamadnagar.**

DEPARTMENT ANNUAL REPORT

YEAR – 2019-20

DEPARTMENT OF PHYSICS



shutterstock.com • 1177516189

By

Head, Department of Physics

PROF. V. R.PANDE.

S.B.V.P. Samaj's
Sahakar Maharshi Bhausaheb Santuji Thorat College of Arts,
Science & Commerce, Sangamner (422605)
Dist :-Ahamadnagar.

Departmental Report 2019-20

1. Name of the Department :- Physics
2. Year of establishment :- June 1992
3. Is the Department part of a School/Faculty of the university? No
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) :-UG.

Sr. No.	Name of Course	Intake Capacity
1	F.Y.B.Sc	120
2	S.Y.B.Sc	120
3	T.Y.B.Sc	120

5. Interdisciplinary programmes and departments involved :- Nil
6. Courses in collaboration with other universities, industries, foreign institutions, etc. :Nil
7. Details of programmes discontinued, if any, with reasons :-Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Sr. No.	Name of Program	Annual/ semester/choice based credit system
1	F.Y.B.Sc	Annual
2	S.Y.B.Sc	Semester
3	T.Y.B.Sc	Semester

9. Participation of the department in the courses offered by other departments :-- Nil

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/ others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	--	--	
Associate Professors	01	01	01
Asst. Professors	03	03	01
Others	--	--	

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Mr. Vijaykumar.R.Pande.	M.Sc. B.Ed.	Associate professor	Physics	29 years	--
Mr. Madhav.V.Jadhav	M.Sc.	Assistant professor	Physics	28years	--
Mrs. Supriya.A.Vaidya	M.Sc.	Assistant professor	Physics	01years	--
Mrs. Rohini.S.Naikwadi	M.Sc.	Assistant professor	Physics	01years	--

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors :- Nil

13. Percentage of classes taken by temporary faculty - programme-wise information

Sr. No.	Class	Lectures	Practical
1	F.Y.B.Sc	00 %	(12), 60.00%
2	S.Y.B.Sc	00 %	(4), 33.33 %
3	T.Y.B.Sc	(16) , 66.66%	(8) , 66.66 %

14. Programme-wise Student Teacher Ratio :-

Academic Year	B.Sc. Student Strength F.Y./4 +S.Y./4 +T.Y./1	Number of Teacher	Student : Teacher Ratio
2019-20	97/4 + 56/4 +06/1 = 44	04	11:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual -

	Sanctioned	Filled
Technical staff	01	01
Administrative staff	--	--
Other	--	--

16. Research thrust areas as recognized by major funding agencies :- Nil

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. :- Nil

18. Inter-institutional collaborative projects and associated grants received :- Nil

- a) National collaboration b) International collaboration

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. :- Nil.

20. Research facility / centre with :- Nil

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies :- Nil.

22.Publications:

23.Publications (Conference /Seminar)

A). Pande V.R :-

Title of paper	Name of the author/s	Name of journal	Year of publication	ISBN/ISSN number
Study of Structural, Morphological and Dielectric Properties Of Copper Doped Nio ₃ ,Cuo ₂ ,Zno ₂ ,Fe ₂ o ₄ , Nanoferrites, Using Sol- Gel Technique.	Pande V. R, Bhise R.B.	Journal Applied Science and Computations (JASC)	January 2019: New Arts, Commerce and Science College Shevgaon, 414502 Dist :- Ahamedanagar “National Conference on Recent Development in Material Science and its application” Volume VI Issue I	ISSN:1076-5131 Impact Factor :- 5.8

*Number of papers published in peer reviewed journals (national / international)

* Monographs

*Chapters in Books *Edited Books

* Books with ISBN with details of publishers

*Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

*Citation Index - range / average *SNIP

* SJR

*Impact Factor - range / average *h-index

24 Details of patents and income generated : -Nil

25 Areas of consultancy and income generated :- Nil

26. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad :Nil

27. Faculty serving in : Nil

a) National committees b) International committees c) Editorial Boards d) any other (please specify)

28.Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs). :Nil

29.Student projects

Sr. No	Particular	Class	No of Students
--------	------------	-------	----------------

1	Project Course	T.Y.B.Sc.	06
2	Science Exhibition (Jan. 2019)	F.Y.B.Sc., S.Y.B.Sc. and T.Y.B.Sc.	101

- percentage of students who have done in-house projects including inter-departmental projects
- percentage of students doing projects in collaboration with other universities / industry / institute

30.Awards / recognitions received at the national and international level by: Nil

- Faculty
- Doctoral / post doctoral fellows
- Students

31.Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any. :Nil

Seminar /Conference /Workshop Attended :-

Sr. No.	Name of the Faculty	Name of the Seminar /Conference /Workshop	Organized by	Level	Date
1	Mr. V.R.Pande	Reframing of S.Y.B.Sc. Physics Syllabus Workshop	P.V.P College Pravaranagar.	University	17 th Jan. 2020
		State level Workshop Observation of Biodiversity and sacred grooves of Kalsubai	D.Y.Patil Arts, commerce and science College Akurdi ,Pune	State	20 th to 22 nd Dec. 2019
		F.D.P. on ICT Tools for Teaching Learning process By Swami Ramanad Tirth Marathwada University Nanded. On 11 th to 16 th May. 2020.	Swami Ramanad Tirth Marathwada University Nanded.	University	11 th to 16 th May. 2020.
2		International Conference Webinar Thakur College Mumbai on 2 nd May 2020.	Thakur College Mumbai .	College	2 nd May 2020.
3		One day online workshop on composing Quality M.C.Q.	S.P.P.U., PanditMadan Mohan Malviya National Mission on Teacher and Teaching MHRD Govt. of India and ITSPM, arts, commerce and Science College Indapur.	University	11 th may 2020.
4		Webinar , “Material Science Technology and Society”.	JNU New Delhi.	University	8 th and 9 th May 2020 .
		One week online Faculty Development Program entitled Moodle :“ Learning Management System ” (LMS) organized byENTC Engineering STES’S Smt. Kashabai Nawale Engineering College	BENTC Engineering STES’S Smt. Kashabai Nawale Engineering College Pune, and Spoken tutorial ,and IIT Bombay.	University	13 rd May to17 th May 2020

		Pune, and Spoken tutorial ,and IIT Bombay.13 rd May to 17 th May 2020			
		F.D.P. on “ Web Designing Course ”organized by MIT and Arts, coomerce and Science college Alandi ,Dist :- Pune Between 25 th May to 30 th May 2020.	MIT and Arts, coomerce and Science college Alandi ,Dist :- Pune	University	25 th May to 30 th May 2020.
Mr. M.V.Jadhav		Reframing of S.Y.B.Sc. Physics Syllabus Workshop	P.V.P College Pravaranagar.	University	17 th Jan. 2020

32 Code of ethics for research followed by the departments : Nil

33. Student profile programme-wise: - 2018-19(April -2019)

F.Y.B.Sc Annual Pattern

Subject	Admitted	Exam Appear	Pass	Fail	Abs.	Per.	Teachers Name
Phy – I	157	150	118	29	03	80.27	Mr.Jadhav M.V.
Phy – II	157	150	87	59	04	59.59	Mr. Pande V.R.
Phy - III	157	150	148	00	02	98.67	Mr. Pande V.R. / Miss. Gunjal R.D./ Miss. Abhale R.V.

Second Term S.Y.B.Sc Semester II

Subject	Admitted	Exam Appear	Pass	Fail	Abs.	Per.	Teachers Name
Phy – I	40	40	30	10	00	75.00	Mr. Pande V.R.
Phy – II	40	40	18	22	00	45.00	Mr.Jadhav M.V.
Phy - III	40	40	40	00	00	100.00	Mr.Jadhav M.V. / Miss. Gunjal R.D.

Second Term T.Y.B.Sc Semester II

Subject	Admitted	Exam Appear	Pass	Fail	Abs.	Per.	Teachers Name
Phy – I	05	05	05	00	00	100	Miss. Gunjal R.D.
Phy – II	05	05	05	00	00	100	Miss. Gunjal R.D.
Phy - III	05	05	05	00	00	100	Miss. Abhale R.V.
Phy – IV	05	05	05	00	00	100	Mr. Pande V.R.

Phy – V	05	05	05	00	00	100	Mr. Jadhav M.V.
Phy –VI	05	05	04	01	00	80.00	Miss. Abhale R.V.
Phy Pract.– I	05	05	05	00	00	100	Mr. Jadhav M.V.
Phy Pract.– II	05	05	05	00	00	100	Mr. Pande V.R. / Miss. Gunjal R.D.
Phy Pract.- III	05	05	05	00	00	100	Mr. Pande V.R. / Mr. Jadhav M.V./ Miss. Gunjal R.D./ Miss. Abhale R.V.

34..Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
	100			

35.How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise. :Nil

36.Student progression

Student progression	Percentage against enrolled
UG to PG :- 2016-17	55.55
UG to PG :- 2017-18	12.5
UG to PG :- 2018-19	20
PG to M.Phil.	
PG to Ph.D.	
Ph.D. to Post-Doctoral	
Employed <input type="checkbox"/> Campus selection <input type="checkbox"/> Other than campus recruitment 2017-18	12.5
Entrepreneurs	

37. Diversity of staff

Percentage of faculty who are graduates	
of the same university	100
from other universities within the State	--

38. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : Nil

39. Present details of departmental infrastructural facilities with regard to Library :-
2019-20

Sr. No	Books	No. of Books	Amount Rs.
1	Text	100	9150
2	Reference Books	04	3122

Departmental Library :-

Sr. No	Books	No. of Books	Amount Rs.
1	Text	55	5627
2	Reference Books	35	7175

- a) Internet facilities for staff and students :- yes, department has internet connection ,staff and students uses the Internet for the academic work.
- b) Total number of class rooms
- d) Class rooms with ICT facility
- e) Students' laboratories :- for the Students

Sr. No	Laboratory	Size
1	Lab. No. I (F.Y.B.Sc)	9.20 m * 7.75 m
2	Dark Room	6.00 m* 6.07 m
3	Lab. No. II (S.Y.B.Sc. & T.Y.B.Sc.)	9.11m * 7.75m

f.) Research laboratories

40. List of doctoral, post-doctoral students and Research Associates : Nil

- a) from the host institution/university
- b) from other institutions/universities

41. Number of post graduate students getting financial assistance from the university. : Nil

42. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. : Nil

43. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

The feedback is obtained from the students of T.Y.B.Sc. class on curriculum, Students Satisfaction Survey and analysis is made of the feedback. If there are any suggestion it is utilized for the progress.

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

44. List the distinguished alumni of the department (maximum 10)

YEAR	NAME OF THE STUDENTS	NAME OF THE INSTITUTE	MOBILE
2016-17	Gadakh Kaveri Subhash	Sangamner college Sangamner , Dist :- Ahamadnagar	9922282472
	Bhandari Nikhil Maruti	Sangamner college Sangamner , Dist :- Ahamadnagar	8788911269
	Landage Varsha madhav	Sangamner college Sangamner , Dist :- Ahamadnagar	9822769375
	Wale Jitendra Sampat	Ahamadnagar College Ahamadnagar	9665381063
	Pawase Mahesh Janardhan	Amrutvahini Institute of Management and Business Administrations Sangamner . Dist :- Ahamadnagar	9158654232
	Rahane Ganesh Kisan	I.T.B.P. force Madhyapradesh	9623927526
2017-18	Pawar Pratik Bhaskar	Post Graduation Diploma in Radiotherapy Technologist Duration :- 2year Rashra sant Tukadoji Regional Canser Hospital and	657101219

		Teaching Institute ,Nagpur.	
2018-19	Avhad Kaveri Narayan	Amrutvahini Institute of Management and Business Administrations Sangamner . Dist :- Ahamadnagar	9325744879

45. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

1. workshop on power point presentation :-

Sr. No.	Date	Name of Resource person	No. Of Students
1	24 th Dec. 2019	Prof. Laxmikant D. Dalvi. Department of Electronics. S.M.B.S.Thorat College ,Sangamner.	33

2. Guest Lecture :-

Year	Name of the Guest	Name of the Institute	Date	Topic	No. of Students Present
2019-20	Prof. Laxmikant D. Dalvi.	Department of Electronics. S.M.B.S.Thorat College ,Sangamner.	26 th Dec. 2019	Encoder and Decoder	49
	Dr. Sandip Arote.	Department of Physics Sangamner college Sangamner , Dist :- Ahamadnagar	06 th March 2020	Future after B.Sc.	13

3. Students Seminar: -

5 Sep 2017

Sr. no	Name of the Student	Topic
1.	Miss:-Gadakh Shital raosaheb	Algorithms, Flowcharts.
2.	Miss: _Jadhav Priyanka Anil	Spherical Coordinate geometry.
3.	Miss:-Jondhale Pallavi	Motion of Charged Particle.
4.	Mr.Sonawane Sagar Ashok	Motion of Central forced field.
5.	Miss:-Argade Pallavi Shankar	Expressions for curl, gradient.

6.	Miss:-Helkar Manisha Balasaheb	Renewable energy Sources.
7.	Miss: _Sahane Sonam Bhausahab	Two Valance Electron

Students Seminar :-

21 Feb 2018

Sr. no	Name of the Student	Topic
1.	Miss:-Argade Pallavi Shankar	Elation between group velocity and phase velocity
2.	Miss:-Gadakh Shital raosaheb	Nuclear Reaction
3.	Miss:- Helkar Manisha Balasaheb	Combinational Circuit
4.	Miss:- Jadhav Priyanka Anil	Expression of Group Velocity

Students Seminar :-

22 Feb 2018

Sr. no	Name of the Student	Topic
1.	Miss:- Jondhale Pallavi Parashram	Thermodynamical Function
2.	Mr. Pawar Pratik Bhaskar	Light Emitting Diode(LED)
3.	Miss:- Sahane Sonam Bhausahab	Schrodinger Time Dependent Equation
4.	Mr. Sonawane Sagar Ashok	Photomultiplier

Students Seminar :-

05 Sep 2018

Sr. No.	Name of the Student	Class	Topic
1	Mr.Mokal Hashal Mohan	T.Y.B.Sc	General Physics
2	Miss.Valave Suvarna Sudam	T.Y.B.Sc	Newtons Law
3	Miss. Varpe Ujjwala Machhindra	T.Y.B.Sc	Energy bands in Solids
4	Miss Kathe Komal	T.Y.B.Sc	Pauli Exclusionprinciple and electron configuration
5	Miss. Avhad Kaveri Narayan	T.Y.B.Sc	Renewable sources
6	Mr. Dighe Mayur	F.Y.B.Sc	Kinetic Energy
7	Mr.Phatangare Vaibhav	F.Y.B.Sc	Frank and Hertz Experiment

Sr. No.	Name of the Student	Class	Topic
1	Shinde Rutuja R.	S.Y.B.Sc.	Newton's Law
2	Waman Rutuja S.	S.Y.B.Sc.	Elasticity
3	Ghuge Nayana Kailas	F.Y.B.Sc.	Structure of Atom
4	Thorat Ashwini S.	F.Y.B.Sc.	Law of conservation of energy.
5	Wakchaure Priyanka A.	F.Y.B.Sc.	Covalent Bond.
6	Kuldharan sadhana D.	F.Y.B.Sc.	Kirchoff's law.
7			

46. List the teaching methods adopted by the faculty for different programmes.

1. Lecture Method
2. Demonstration , Experiment Method.
3. Problem Solving Method.
4. Power point presentation.
- 5 Study Tour.

47. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

The systematic and planned curricula from first year to the third year shall motivate and encourage the students for pursuing higher studies in Physics and for becoming an entrepreneur.

Objectives:

- To provide in depth knowledge of scientific and technological aspects of Physics
- To familiarize with current and recent scientific and technological Developments
- To enrich knowledge through problem solving, study visits, projects etc.
- To train students in skills related to research, education, industry, and market.
- To help students build-up a progressive and successful career in Physics

Our teachers provide an individual and collaborative learning. To engage students in higher thinking and investigations, our teachers have adopted the following teaching methods.

- 1) Lecture Method
- 2) Problem Solving Method
- 3) Projects
- 4) Presentations

1. Lecture Methodologies

Our teacher engage 72 lectures in one academic year for first year, and minimum 96 lecture in one academic year for second year and third year class. Our teachers teach the 100 % Syllabus, designed by SPPU for the respective courses.

2. Problem solving Methodologies

Our teachers demonstrate problem solving methods on all topics covered in the syllabus. After the completion of each chapter minimum 3 to 4 lectures are engaged for problem solving and try to work out the problem by students compulsory. So that students get problem solving skills in all topics covered in the syllabus.

3. Experimental Learning

For first and second year physics students the one practical course is compulsory. For third year physics students two practical courses are compulsory. In each practical course the students have to complete minimum 20 experiments compulsory. At first year level there is a batch of 15 students, and at second and third year there is a batch of 12 students. Practical of each batch is conducted one day of 3 clock hours in a week. as per time table.

4. Projects

Our teacher guides the students to undertake small projects and participate in Avishkar competition organized by SP Pune University. One practical course for the third year B. Sc. Physics students are compulsory and in that the students have to complete the project work. The students undertake a project individual or in the group of two students. They must do the practical work, prepare a project report and gives the presentation through LED projector.

5. Presentations

Our department organizes the workshop on “power point presentation” last two years. In the workshop the students has given the training about how to prepare a power point presentation and how to present the lectures. Then the students prepare and give their project presentation using power point presentation.

48.Highlight the participation of students and faculty in extension activities. :-

- 1 .Cultural activities , annual gathering.
- 2.Organisation of Science Exhibition.

49.Give details of “beyond syllabus scholarly activities” of the department.

A) The Study Tour Was Organized at Kalsubai , Bhandardara damp.Tal:- Akole
Dist :- Ahamedanagar For T.Y.B.Sc. Students. On on 5th Jan. 2020,

B) The **PPT And Poster Presentation Competition** also organized by the department on 13th Jan 2020 and 17th Jan. 2020 respectively.

50.State whether the programme/ department is accredited/ graded by other agencies?
If yes, give details.

The Institute / department is ISO 9001-2015 Certified

The Institute / department is Green Audit Certified

51.Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

The Students of S.Y.B.Sc. and T.Y.B.Sc. have basic knowledge of the Electronics, by using this, the Department of Physics Designed the Add – on course having titled “Electrical Maintenance”, duration of the course is 15 days.

52.Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strength :-

1. Young qualified and eligible staff.
2. Well equipped, spacious laboratories,with LED projector.
3. Internet facility in the laboratories.
4. Use of computer in teaching.
5. Good co – ordinal relation of teachers and students.

Weakness :-

1. Teachers are trying to qualify NET SET Examination.

Opportunities :-

1. To motivate staff and students for research and publications.

Challenges :-

1. To inculcate the research attitude among the Staff.

• Future plans of the department.

1. To interact with industries.
2. To enhance and encourage the research.

Head,

Department of Physics

Mr.Vijaykumar.R. Pande