

S.S.E.S.AMRAVTI'S SCIENCE COLLEGE, NAGPUR

Annual Report for the Session 2018-19

Department of Physics

Year of Establishment: UG: 1967, PG: 2011-12, CoC: 2013-14, Ph. D /Lab Recognition: 2014-15

1. No of **Certificate / Diploma / Advanced Diploma / PG Diploma** Courses run by Departments: 03
2. Total Number of students

UG		PG		Ph. D.	Others	
B.SC. I	145	M.Sc. I	22	06	Certificate (MAPLE)	15
B.SC. II	155	M.Sc. II	21		Diploma (MAPLE)	15
B.SC. III	129	MCA-I				
BCA I		MCA-II				
BCA II		-				
BCA III		-				
Total	429	Total	43	06	Total	30

3. Faculty profile of Regular/Permanent Teaching Staff with name, qualification, designation.

Sr. No	Name	Qualification	Designation	No. of Years of Experience
1	Dr D K Burghate	M.Sc.,Ph.D	Principal	38
4	Dr S W Anwane	M.Sc.,Ph.D.	Associate Professor	20
5	Dr S S Darokar	M.Sc.,Ph.D.	Assistant Professor	14

4. Faculty profile of Adhoc/Contributory Teaching Staff with name, qualification.

Sr. No	Name	Qualification	Adhoc/Contributory	Teaching at UG /PG Level	No. of Years of Experience
1	Ms Sumedha J Tamboli	M.Sc.	Ad-hoc	PG	3 yrs
2	Mr Bhaurao Balbudhe	M.Sc. SET	Ad-hoc	PG	Nil
3	Mr Sarang Daf	M.Sc. SET	Ad-hoc	PG	1 yrs
4	Mr C Ruchir Kumar	M.Sc. SET	Ad-hoc	UG	2 yrs
5	Ms Pratiksha P Dixit	M.Sc.	Ad-hoc	UG	1 yrs
6	Mr Pratik M Deshmukh	M.Sc.	Ad-hoc	UG	2 yrs

5. Details of Administrative and Technical staff

Sr No	Name of the staff	Designation	Permanent /Temporary/ Daily-wages
1	D.S.Wankhade	Lab.Assistant	Permanent
2	D.A.Thakare	Lab.Attent	Permanent
3	H.M.Dhawad	Lab.Attent	Permanent

6. Faculty recognized as a Supervisor / No of Students Registered

Sr. No	Name of the Supervisor	No of Students Registered	Whether Ph. D. Awarded
1	Dr S W Anwane	02	-
2	Dr S S Darokar	01	-

7. Results of the RTM Nagpur university examinations Winter -2018

Class	Total No of Students admitted	Appeared	Passed	Fail	Distinction	Pass %
B.SC. Sem- I	145	145	108	37	21	74.48
B.SC. Sem-III	155	155	123	32	24	79.35
B.SC. Sem-V	123	123	100	23	27	81.37
M. Sc. Sem-I	20	20	9	11	5	54.00
M. Sc. Sem-III	20	19	10	09	5	52.00
Ph. D.	10	-	-	-	-	02

8. Results of the RTM Nagpur university examinations summer 2019

Class	Total No of Students admitted	Appeared	Passed	Fail	Distinction	Pass %
B.SC. Sem- II	141	141	96	45	24	68.08
B.SC. Sem-IV	148	148	99	49	22	66.80
B.SC. Sem-VI	129	129	113	16	21	87.75
M. Sc. Sem-II	20	20	13	07	03	68.42
M. Sc. Sem-IV	20	20	12	08	01	60.00
Ph. D.	10	-	-	-	-	-

9. Awards / Recognitions (Merits, Gold Medal, Silver Medal etc.) received by students:

Name of the Student	Class	Details of the awards/ recognitions	National / State / University/ Dist/ College Level	Year
Manisha Sharma	B.Sc. -1	INSPIRE Scholarship by DST	National	3 years
Labesh Gupta	B.Sc. -1	INSPIRE Scholarship by DST	National	3 years
Aditi Mohatkar	B.Sc.- 1	INSPIRE Scholarship by DST	National	3 years

10. Awards / Recognitions received by faculty:

Name of the Faculty	Details of the awards/ recognitions	International / National / State / University/ Dist/ College Level	Year
Dr D K Burghate	Ideal Principal Award	Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur	2011

	Lifetime Achievement	2ND International Conference on “Science and Technology for Society” Colombo, Sri Lanka	2015
	Ideal Principal Award	Shri Shivaji Education Society, Amravati	2015
Dr H K Dahule	Best Researcher Award	Science College, Congress Nagar Nagpur	2015
Dr S W Anwane	Senior Research Fellowship	<i>Council of Scientific & Industrial Research (CSIR),</i> New Delhi, INDIA	1994,1996
Dr S S Darokar	Best Teacher Award	Science College, Congress Nagar Nagpur	2015

11.

Faculty participation in conferences/seminar/workshop and symposia:

Name of the Faculty	State Level		National Level		International Level	
	Attended	Presented papers	Attended	Presented papers	Attended	Presented papers
Dr S W Anwane			01	01		
Dr S S Darokar			02	02	01	01 India

12. Details of Major / Minor Projects and Research funds sanctioned and received from various funding agencies, industry and other organizations

Name of the Faculty	Major/ Minor Any other (Specify)	Duration From -To	Funding Agency	Grant sanctioned	Grant Received	Whether Completed/ Ongoing
Dr.D.K. Burghate	Major	2012-2015	UGC	11,42,800	11,42,800	Completed
Dr.S.B.Kondawar	Major	2008-2011	UGC	8,19,300	8,19,300	Completed
Dr.H.K.Dahule	Minor	2010-2012	UGC	1,20,000	1,20,000	Completed
Dr S W Anwane	Minor	2009-2011	UGC	1,55,000	1,55,000	Completed
Dr S S Darokar	Minor	2009-2011	UGC	1,65,000	1,37,500	Completed

13. No of research publications:

Name of the Faculty	Peer Review Journals			Non-Peer Review Journals			Conference proceedings		
	International	National	Other	International	National	Other	International	National	Other
Dr S W Anwane	16						05		
Dr S S Darokar	05						04		

14. No of research publications listed in International Database (SCOPUS / Google Scholar)

Name of the Faculty	No of research publications in SCOPUS	No of research publications in Google Scholar	Citations	h-index	i10-index
Dr S W Anwane	9	9	21	2	1
Dr S S Darokar	3	15	19	2	1

15. Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

16. Details of publication of Chapter in Book/ Book Edited/ Book Published by the faculty

Name of the Faculty	Chapter in Book	Book Edited	Book Published			Year of Publication
			Title of the Book Published	ISBN/ISSN	Publisher	
Dr S W Anwane	01	03	Advanced Energy Materials Chapter: <i>Solid Electrolytes – Principles & Applications</i>	9781118686294	Scrivener Publishing	2014
			<i>Fundamentals of Electromagnetic Fields</i>	1934015008	Infinity Science Press, USA	2007
			<i>A Course in Electromagnetic Fields</i>	81-8333-086-X	BPB Publications	2005
			<i>A textbook of Engineering Physics</i>	-	Nirali Prakashan, Pune	1997
Dr S S Darokar			Mechanics and Oscillation	978-93-82962-01-4	G.C.Publisher Nagpur	2012
			B.Sc.Sem I Physics paper I Properties of matter and mechanic	978-93-82962-12-0	G.C.Publisher Nagpur	2013

			B.Sc.Sem I Physics paper I & II Properties of matter and mechanics(Revised edition)	978-93-82962-12-0	G.C.Publisher Nagpur	2014
Dr S S Darokar			B.Sc.Sem II Physics paper I& II	978-93-82962-26-7	G.C.Publisher Nagpur	2014
			B.Sc.Sem III Physics paper I& II	978-93-82962-39-7	G.C.Publisher Nagpur	2015
			B.Sc.Sem IV Physics paper I& II	978-93-82962-53-3	G.C.Publisher Nagpur	2015
			B.Sc.Sem III Experimental Physics	978-93-81432-75-4	Sai Jyoti Publication Nagpur	2015
			B.Sc.Sem IV Experimental Physics	978-93-81432-73-0	Sai Jyoti Publication Nagpur	2015

17. Areas of consultancy and Revenue generated through consultancy

Areas of consultancy	Revenue generated through consultancy before the assessment period	Revenue generated through consultancy during the assessment period
-	-	-

18. Conferences/Seminar /workshop/Guest Lect. organized by the Department.

Guest Lectures Arranged by the Department

Academic Activities for students and Faculty members of the Department

- **1st Oct 2018, Nagpur :** *Dr. Vilas A Tabhane*, Emeritus Professor of Physics, Post Graduate Teaching Department of Physics, Pune University, introduced to the students the age old traditional topic of *Waves and Oscillations* in a very innovative way along with exciting applications for students of the college.
- **19th Jan.2019, Nagpur:** Under the edges of Physics Society two lectures were organized on *Fiber Optics & Applications* for Under Graduate students and on Nuclear Physics for Post Graduate students by Prof A A Pakhale, Asst Professor, Forensic Science Institute, Aurangabad.

- 31/12/2018 : Under the edges of Physics Society two lectures were organized on *Classical Mechanics* for Under Graduate students by Prof R V Joat, Department of Physics, Vidya Bharti Mahavidyalaya, Amravati.
- **25th Jan.2019, Nagpur:** Under the edges of Physics Society a Guest Lecture on “Opportunities for Science Students” was delivered by Dr Balasaheb Deshmukh for Under Graduate students and Post Graduate students.
- 09/02/2019: Dr S W Anwane, Associate Professor and Head deliberated a Workshop on *Special Relativity using 4-Vectors*. Under Graduate Students of Final Year B Sc and PG students attended the same which was organized by Physics Society.
- **Inaugurated Physics Association at Dharampeth Science College by delivering Lecture on “Conflict of Principles”** 7th August 2018: Inaugurated Physics Society at Dharampeth Science College, Nagpur and delivered a lecture on *Conflict of Principles*. Sometimes Principles collide when TWO things which are so deeply rooted – which you cannot conceive that either being false. And when they are taken together, they lead us to contradiction.
- **Delivered lecture at Jawaharlal Nehru College, Wadi-Nagpur on “Black Holes”:** 18th Feb 2019: Delivered lecture on Black Holes for the Certificate Course in Basic Applications in Physics at Jawaharlal Nehru College, Wadi Nagpur.
- 17/01/2019: A **Memorandum of Understanding** with *VidyaBharti College Amravati* has been established amongst two college for shearing academic resources effectively.
- **National School on Computer assisted spectroscopic data Interpretation Techniques 7-11 Jan 2019**
- The Department of Physics Collaborated with the Department of Physics, RTM Nagpur University, Nagpur in organizing National School on Computer assisted spectroscopic data Interpretation Techniques during 7-11 January 2019 at the auditorium of National Bureau of Soli Survey, Amravati Road, NAGPUR. About 101 participates were registered from all over the country and deliberations were given my eminent scientist. The School was inaugurated at the hands of Dr S M Yusuf, Head, Solid State Physics Division, Bhabha Atomic Research Centre, Mumbai.
- **VUPTA Seminar:** Students of our college participated in Vidarbha University Teachers Association organized seminar competition on 10th March 2019 at SFS College Nagpur. UG Students: Ms Roshni Pahuja, Ms Bhumika Ghumde, Anurag Kulkulewar, Snehal Sharma, Labhesh Gupta, Piyush Raut, PG Students : Dhanashree Gughal, Yogesh Nimje participated in the seminar. Ms Roshni Pahuja (B Sc III) bagged First Prize in VUPTA Seminar.

PhysicsPro Mobile App Developed

The app facilitates Physics Learning for UG/PG students in the Science and Engineering Faculty. It mainly caters Video Lectures as well as notes in PPT and PDF format. We have plans to cover major areas pertaining to the curriculum devised by Indian Universities. This app developed by students is available on Google Play Store:

<https://play.google.com/store/apps/details?id=com.physicspro.bhushandhapodkar.physicspro&hl=en>

In 2018 Dr S W Anwane is Nominated on the **Board of MAPLE Ambassador** for SAARC region to inspire and educate others about the benefits that Maple brings to STEM Education.

YouTube Channel-INNOVATIVE way to reach students at large

In year 2013-14, Department of Physics, Shri Shivaji Education Society Amravati's SCIENCE COLLEGE, Nagpur has commenced UGC sponsored Career Oriented Course - Mathematical Modeling using MAPLE.

1. Started You Tube Channel MAPLE Flipped Class-Room to reach students at large.
2. Developed You Tube video to demonstrate experiments to students.

19. Details on student enrichment programs (special lectures/workshops/seminar) with external experts:

Title/ Topic of the Program	Whether lectures/ workshops/seminar /other	Name of the external experts	Details of the external experts	Period of Program

20. Participation in Institutional Social Responsibility (ISR) and Extension activities:

Name of the Faculty/	Details of Participation in Co-curricular activities	Details of Participation in Extracurricular activities	Details of Participation in Extension activities including Institutional Social Responsibility (ISR)	Details with dates and period
Dr.S.W.Anwane	CPE Programme	Coordinator	CPE, AISHE	
Dr.S.S.Darokar	NSS	Advisor		

21. List of Alumni of the Departments:

Sr No	Name and available details
1	Ashish A. Mahabal Senior Research Scientist At Cal. Tech. U.S.A.
2	Appulingam Shriram Working in NABARD
3	Dr. Ashish A. Deshmukh Pursuing Ph.D. IISc Bangalore
4	Mr.Prafulla D.Vairagade M.Sc. Applied Geology IIT Mumbai.
5	Ku.Pooja Pingale Canara Bank Mumbai
6	Ku.Roop Singh. IIM
7	Dr.Kamlesh Moon M.P. Deo Science College, Nagpur
8	Dr.S.N.Patil M.Sc.Physics, Associate Prof. Nashik.
9	Shri Rahul D.Khade Advocate High Court Nagpur
10	Dr.Vikas Bangre, Institute of Science, Mumbai

11	Mr. R. J. Sasan Indian Air Force
12	Mr. A. M. Lele Multinational Based Elect. Space Company U.S.A.
13	Mr. G. Agarwal IIT Guwahati
14	Mr. V. S. Marathe UK
15	Ku. Sandhya U.S.A.
16	Mr. Joshi S. S. Indian Air Force
17	Dr. Varambhe Prof. Food & Tech LIT Nagpur
18	P. V. Dhanodkar System Engg. United Bank Of India Pune
19	Shri Jayant M. Borade NIC Nagpur
20	Shri. Arora Programmer UK
21	Dr. Satish Sangode Scientist E Wadia Inst. of Himalaya Geology Deharadon (UP)
22	Shri V. K. Patkhmode Hydrologist GSDA Pune
23	Shri Devendra Mahajan Hydrologist Sahara India, Lonawala
24	Shri Anup Fartode Lecturer KDK Engg. College, Nagpur
25	Appulingam Shriram Geologist Nabard Patna Bihar
26	Shri D. M. Kolte ,Nagpur
27	Shri. Ravi Bhoyar Adv. High Court Nagpur
28	Shri. Arora Programmer UK
29	Shri V. K. Patkhmode Hydrologist GSDA Pune
30	Shri Devendra Mahajan Hydrologist Sahara India, Lonawala
31	Shri Anup Fartode Lecturer KDK Engg. College, Nagpur
32	Appulingam Shriram Geologist Nabard Patna Bihar
33	Shri D. M. Kolte ,Nagpur
34	Shri. Ravi Bhoyar Adv. High Court Nagpur
35	Shri. Arora Programmer UK
36	Dr.S.N.Patil M.Sc.Physics ,Associate Prof .Nashik.
37	Dr.Kamlesh Moon M.P. Deo Science College, Nagpur
38	Mr. Malke Govt Poly,Sadar Nagpur.
39	Mr. C.G.Pande WCL
40	Mr. Y.S. Tijare,Nagpur.
41	Mr.Mukwane Meyo Hospital, Nagpur
42	Ku.Nikita Mathankar Enthrall Tech Pune
43	Ku.Renuka Raut Enthrall Tech Pune

22. Plan for the Current Academic Session (2019-20) :

To strengthen academic activities in the department for various courses viz; UG, PG, CoC, Research Centre.

23. Future plan for Next Academic Session (2019-20) :

To strengthen academic activities in the department for various courses viz; UG, PG, CoC and Research Centre.

24. Any other information: -

Date:15/02/2020

Signature
Head
Department of Physics