

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

Annual Report for the Session 2020-21

Department of Physics

Year of Establishment: UG: 1967, PG: 2011-12, CoC: 2013-14, Ph. D /Lab Recognition: 2014-15, 2020-21

1. No of Certificate / Diploma / Advanced Diploma / PG Diploma Courses run by Departments: 00
2. Total Number of students

UG		PG		Ph. D.	Others	
B.SC. I	151	M.Sc. I	25	04		
B.SC. II	143	M.Sc. II	22			
B.SC. III	178	MCA-I				
BCA-I		MCA-II				
BCA-II		-				
BCA-III		-				
Total	472	Total	47	04		

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

Sr. No	Name	Qualification	Designation	No. of Years of Experience
1	Dr S W Anwane	M.Sc.,Ph.D.	Professor & Head	21
2	Dr G L Jadhav	M.Sc.,Ph.D.	Assistant Professor	2
3	Mr C Ruchir Kumar	M.Sc.	Assistant Professor	2

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 Pratiksha P Dixit	M.Sc.	Ad-hoc	UG	3 yrs
2	Ms Akshya Kothare	M.Sc.	Ad-hoc	PG	1 yr
3	Mrs S A Narkhede	M.Sc.	Ad-hoc	PG	1 yr
4	Ms Vaishnavi Parhad	M.Sc.	CHB	PG	1 yr

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
4	Roshan Naik	Attendant	Daily Wages
5	Rutuja Gharde	Attendant	Daily Wages

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	-

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	155	155	151	4	37	97.58
B.SC. Sem-III	145	145	143	2	50	98.62
B.SC. Sem-V	178	178	178	0	40	100
M. Sc. Sem-I	25	25	25	0	15	100
M. Sc. Sem-III	22	22	22	0	0	100
Ph. D.	4	-	-	-		

8. Results of the RTM Nagpur university examinations summer 2021

Class	Total No of Students admitted	Appeared	Passed	Fail	Distinction	Pass %
B.SC. Sem- II	156	156	155	1	74	99.67
B.SC. Sem-IV	142	142	142	0	48	100
B.SC. Sem-VI	177	177	177	0	78	100
M. Sc. Sem-II	24	24	24	0	15	100
M. Sc. Sem-IV	22	22	22	0	09	100
Ph. D.	04	-	-	-		

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
Lokita Parmanand Patle	B.Sc. VI	Merit Rank #1 in RTM Nag Univ S/2020	University	3 rd Year
Tejaswinini Umesh Soni	B.Sc. VI	Merit Rank #8 in RTM Nag Univ S/2020	University	3 rd Year

10. Awards / Recognitions received by faculty:

Name of the Faculty	Details of the awards/ recognitions	International / National / State / University/ Dist/ College Level	Year
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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 G L Jadhav			01	01	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	02	00	00	00	00	00	00	00	00

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	15	18	51	4	3
Dr G L Jadhav	2	4	12	1	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		1	The Special & General Theory of Relativity	9798539250829	KDP Amazon	2021
	1		Advanced Energy Materials Chapter: <i>Solid Electrolytes – Principles & Applications</i>	9781118686294	Scrivener Publishing	2014
		1	<i>Fundamentals of Electromagnetic Fields</i>	1934015008	Infinity Science Press, USA	2007
		1	<i>A Course in Electromagnetic Fields</i>	81-8333-086-X	BPB Publications	2005
		1	<i>A textbook of Engineering Physics</i>	-	Nirali Prakashan, Pune	1997

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

Guest Lecture

The department of physics, SSES's Science college, Nagpur is organizing guest lecture on Saturday, 13TH of March 2021 at 10:30 AM through virtual platform.

Topic: - Numerical Methods and its applications in simulations.

Resource Person: - Prof. Pratik Gaiki, Assistant Professor, Shri Shivaji Arts, Commerce and Science College, Motala

Academic Activities for students and Faculty members of the Department

1. Delivered invited talk on *Recent Trends in Research Methodology* and inaugurated Physics Society at the Department of Physics, Vidya Bharti Mahavidyalaya Amravati. About 120 participants attended. (27/02/2021)
2. Delivered invited talk on "*Black Holes and Complementarity*" One Day National Level Webinar Universe, Black hole, Wormhole-A Bird's Eye View, Organized by Department of Mathematics, Arts, Commerce & Science College, Arvi, Dist. Wardha (Maharashtra). About 400 participants attended. (01/02/2021) <https://youtu.be/FqmI-LoXjJc>
3. Delivered invited talk on "*Differential Equations using Maple*" in the national level Webinar - FDP Program on Mathematical Modeling & Simulation Software Maple - MMSSM-2020 was organized in collaboration with Binary Semantics and Government College of Engineering, Nagpur, and explore the new ways of teaching in

YouTube Channel-an innovative way to reach students at large

S W Anwane:

1. The You Tube channel <http://bit.ly/37UDXoq> offers about **116 Video Lectures** on a variety of
2. topics in Undergraduate Physics. The major playlists are as following:
3. Band Theory & Semiconductors [UG Level, 04 Lectures 4.5 hrs]
4. Simple Harmonic Motion [UG Level, 3.5 Lectures 6 hrs]
5. Complex Numbers [PG Level, 23 Lectures 16 hrs]
6. Differential Equations using Maple [Invited Talk in FDP-2020 Webinar, 1.5 hr]
7. Black Holes & Complementarity [Invited Talk in National Conference, 1 hr]
8. Special Relativity using Perplex Numbers [Research Level, 5 Lectures 1.5 hrs]
9. Quantum Mechanics [UG Level, 11 Lectures, 4 hrs]
10. Fluid Mechanics [UG Level Engg, 10 Lectures, 5.5 hrs]
11. Gravitation [UG Level, 6 Lectures, 2.5 hrs]
12. Quantum Mechanics [UG Level, 11 Lectures, 4 hrs]
13. Statistical Mechanics [UG Level, 5 Lectures, 5.5 hrs]
14. Time Varying Fields [UG Level, 13 Lectures, 4 hrs]
15. Electrostatics & Dielectrics [UG Level, 3 Lectures, 3 hrs]
16. MAPLE [Cert Course, 7 Lectures, 3.75 hrs]
17. Introduction to Black Holes [UG Level, 2 Lectures, 0.5 hr]
18. Crystallography [UG Level, 3 Lectures, 0.75 hr]

G L Jadhav:

- 1 Interference of Light (1) <https://youtu.be/XmX12S57pBk>
- 2 Interference of Light (2) <https://youtu.be/VjtYhjoNg3E>
- 3 Interference of Light (3) <https://youtu.be/oyRZTBSNpmY>
- 4 Interference of Light (4) https://youtu.be/_uMFSO56ypA
- 5 Interference of Light (5) <https://youtu.be/gDHd-CS2IAA>
- 6 Interference of Light (6) <https://youtu.be/hZ-QmhhVnO4>
- 7 Interference of Light (7) https://youtu.be/yAhzGDD_dC4
- 8 Field Effect Transistor (1) <https://youtu.be/fdhh9aURsRM>
- 9 Field Effect Transistor (2) <https://youtu.be/bzOmac2yivo>
- 10 Field Effect Transistor (3) <https://youtu.be/afhYEGTCpLM>
- 11 Polarization of Light <https://youtu.be/QuTH33peSuo>

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
Numerical Methods and its applications in simulations	Seminar	Prof. Pratik Gaiki	Assistant Professor, Shri Shivaji Arts, Commerce and Science College, Motala	Saturday 13 th March 2021 10:30AM

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 G L Jadhav	Admissions, Publicity, Students Council, Internal Committee,	Coordinator, Member		

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 Puesday Ph.D. IISC Baglore
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 Deharadoun (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 Bhojar 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 Bhojar 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
44	Padwe Prathesh madhukar
45	Harshal Ravindra Zilpe
46	Padmakshi Naresh Parwe
47	Ghodmare Anjali Krishnaji
48	Anjali Fulkar
49	Aishwarya Sawarkar

50	Anuj Chandrasekhar Ghatate
51	Pranay Babalu Billore
52	Gaurav s. Nirwan
53	Rahul Borkar
54	Ankita C. Bandhekar
55	Pratik Surendra Ghorpade
56	Shweta Kuntawar
57	Amruta Arvind Dadmal
58	Ragini Sunil Meshram
59	Bhakti Jaywant Deshpande
60	Shriya Shrikant Patankar
61	Paris Sudesh More
62	Aditya Shekhar Jogwar
63	Apurva Tiwari
64	Anjali Agrawal
65	Vishwajit Manohar Gaikawad

22. Plan for the Current Academic Session (2020-21) :

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

23. Future plan for Next Academic Session (2021-22) :

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

24. Any other information: -

Date:5/01/2022

Signature
Head
Department of Physics

Analysis of University Result Teacher-wise & Paper-wise

(Year 2020 -2021)

Department of Physics

Sr. No	Name of teacher	Name Department / Subject	Class Winter/ Summer	Paper	Appeared	Pass	%
1	Mr. C.R. Kumar	M.Sc. Physics	M.Sc. Sem.I W/20	I	25	25	100%
2	Dr. S.W. Anwane & Y.Pawar			II	25	25	100%
3	P. Dixit & Yashpal Pawar			III	25	25	100%
4	Dr. S.Pote & Isha Kapte			IV	25	25	100%
5	Mr. C.R. Kumar	M.Sc. Physics	M.Sc Sem II S /21	I	24	24	100%
6	Yashpal Pawar			II	25	25	100%
7	Miss. P. P. Dixit			III	25	25	100%
8	Dr. S.S. Pote			IV	25	25	100%
9	Mr.C. R. Kumar	M.Sc. Physics	M.Sc Sem III W/21	I	22	22	100%
10	Dr. G. L. Jadhav			II	22	22	100%
11	Dr. S. Pote & Isha Kapte			III	22	22	100%
12	Miss .P.P. Dixit			IV	22	22	100%
13	Mr. C.R. Kumar	M.Sc. Physics	M.Sc Sem IV S /21	I	22	22	100%
14	Dr. G.L. Jadhav			II	22	22	100%
15	Dr. S. Pote & Isha Kapte			III	22	22	100%
16	P.P.Dixit & Yashpal Pawar			IV	22	22	100%

University Result of 2020-2021 Semester Wise

Winter 2020/B.Sc. – First Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	156	55	96	151	97.58%

Summer 2021/ B.Sc. –Second Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	156	59	96	155	99.67%

Winter 2020/ B.Sc.- Third Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	145	68	75	143	98.62%

Summer 2021/ B.Sc.- Fourth Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	142	69	73	142	100%

Winter 2020/ B.Sc. -Fifth Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	178	92	86	178	100%

Summer 2021/ B.Sc. -Six Semester

Subject	Appeared	Passed		Total Boys/Girls	Percentage
		Boys	Girls		
Physics	177	91	86	177	100%

Analysis of University Result Teacher-wise & Paper-wise

(Year 2020 -2021)

Department of Physics

Sr. No	Name of teacher	Name Department/ Subject	Class Winter/Summer	Paper	Appeared	Pass	%
1	Ku.Vaishnavi Parhad & Mr.C.RuchirKumar	B.Sc. Physics	B.Sc. Sem I W/20	I	155	151	97.58
2	Dr.S.W.Anwane & Dr. S.Pote		B.Sc. Sem II S/21	I	156	155	99.67
3	S..A.Narkhede & Dr.G.L Jadhav		B.Sc. Sem IIIW/20	I	145	143	98.62
4	Ku.P.P.Dixit &Dr.G.L.Jadhav		B.Sc. Sem IV S/21	I	142	142	100
5	Dr.S.W.Anwane		B.Sc. Sem V W/20	I	178	178	100
6	Dr.S.W.Anwane & Ku. P.P.Dixit		B.Sc. Sem VI S/21	I	177	177	100
7	Dr. S.W.Anwane	B.Sc. Physics	B.Sc. Sem I W /20	II	155	151	97.58
8	Dr. S.W.Anwane & Ku. Isha Kapte		B.Sc. Sem II S/21	II	156	155	99.67
9	Dr. G.L.Jadhav		B.Sc. Sem IIIW/20	II	145	143	98.62
10	Dr. G.L.Jadhav		B.Sc. Sem IV S/21	II	142	142	100
11	Mr. C.Ruchir Kumar & Ku. P.P.Dixit		B.Sc. Sem V W/20	II	178	178	100
12	Ku. Isha Kapte & Mr. Yashpal Pawar		B.Sc. Sem VI S/21	II	177	177	100

University Result of 2020-2021
(B.Sc, B.C.A & M.Sc, M.C.A.)

v - d z	vH;kldze	LUkkdkSRrkj Hkkx & 1 2 3									%
		,dq.k izosf'kr fo kFkhZ			,dq.k ijh{kkF khZ			,dq.k mRrh.kZ fo kFkhZ			
		eq ys	eq yh	,d q. k	e q y s	e q y h	,d q. k	eq ys	e q y h	,dq .k	&
1	B.Sc. & First Semester	56	99	15 5	5 6	9 9	15 5	53	9 6	151	97- 58%
2	B.Sc. & Second Semester	59	97	15 6	5 9	9 7	15 6	59	9 6	155	99- 67%
3	B.Sc.& Third Semester	69	76	14 5	6 9	7 6	14 5	68	7 5	143	98- 62%
4	B.Sc. & Fourth Semester	69	73	14 2	6 9	7 3	14 2	69	7 3	142	100 %
5	B.Sc.& Fifth Semester	92	86	17 8	9 2	8 6	17 8	92	8 6	177	100 %
6	B.Sc.& Six Semester	91	86	17 7	9 1	8 6	17 7	91	8 6	177	100 %
7	M.Sc.& First Semester	5	20	25	5	2 0	25	5	2 0	25	100 %
8	M.Sc.& Second Semester	5	19	24	5	1 9	24	5	1 9	24	100 %
9	M.Sc.& Third Semester	5	17	22	5	1 7	22	5	1 7	22	100 %
10	M.Sc. & Fourth Semester	5	17	22	5	1 7	22	5	1 7	22	100 %

