

Shri Shivaji Education Society Amravati's
SCIENCE COLLEGE, Congress Nagar, Nagpur

DEPARTMENT OF PHYSICS

INTERNAL ACADEMIC AUDIT

2020-2021

1. Vision and Mission of the Department

To achieve academic excellence in teaching Physics at UG and PG level

2. A. Faculty Strength:

Faculty	Recruited	Vacant	Remarks
Regular	2	6	
CHB	5	5	
Ad-hoc	1	5	
Non-teaching	3	2	

B. Faculty profile

Name	Highest Qualification	Designation	Specialization	Teaching Experience
Prof. S. W. Anwane	Ph.D.	Professor	Materials Science	22 years
Dr. G. L. Jadhav	Ph.D.	Assistant Professor	Electronics	2 Years
Mr. C. R. Kumar	M.Sc. SET(Physics)	Assistant Professor (Ad-hoc)	Organic Optoelectronic Devices,	04 Yrs
Miss. P. P. Dixit	M.Sc. Physics	Assistant Professor (Ad-hoc)	Organic Luminescent Materials	02 Yrs
Mr. Yashpal D Pawar	M.Sc. Physics	Assistant Professor (CHB)	Materials Science	01 Yrs
Dr. S. S. Pote	Ph.D.	Assistant Professor (CHB)	Luminescent materials	07 Yrs

Miss. V.V. Parhad	M.Sc. Physics	Assistant Professor (CHB)	Organic Luminescent Materials	01 Yrs
Miss. Isha Kapte	MSc Physics	Assistant Professor (CHB)	Ferroelectrics	01 Year

3. Students' strength

A. (Summer 2021)

Year	Group	Number of Students Admitted
B.Sc. Semester I	PCM	57
	PCsM	56
	PEM	31
	PCG	17
	Total	161
B.Sc. Semester III	PCM	50
	PCsM	52
	PEM	22
	PCG	21
	Total	145
B.Sc. Semester V	PCM	57
	PCsM	58
	PEM	29
	PCG	32
	Total	176
M.Sc. I		24
M.Sc. II		22
Ph.D.		04
Value Added Program		
	Gross Total	532

B. (Winter 2020)

Year	Group	Number of Students Admitted
B.Sc. Semester II	PCM	57
	PCsM	56
	PEM	31
	PCG	17
	Total	161
B.Sc. Semester IV	PCM	50
	PCsM	52
	PEM	22
	PCG	21
	Total	145
B.Sc. Semester VI	PCM	57
	PCsM	58

	PEM	29
	PCG	32
	Total	176
M.Sc. I		25
M.Sc. II		22
Ph.D.		
Value Added Program		
	Gross Total	532

4. Students Performance

A. Result Analysis (Winter 2020) UG & PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B.Sc.	B.Sc. (SEM V)	178	178	100%
M.Sc.	M.Sc. (SEM III)	22	22	100%

B. Result Analysis (Summer 2021) UG & PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B.Sc.	B.Sc. (SEM VI)	177	177	100%
M.Sc.	M.Sc. (SEM IV)	22	22	100%

C. Achievements

A- (Medals/Awards/Prizes at University level)

In S/2020 examination conducted by RTM Nagpur University, two students of the department brought laurels.

Sr. No.	Name of the Students	Class	Title
1	Lokita Parmanand Patle	B.Sc. Sem-VI PCG	Ms Lokita Parmanand Patle secured Merit Rank #1 In S/2020 examination conducted by RTM Nagpur University
2	Tejashwini Umesh Soni	B.Sc. Sem-VI PCM	Ms Tejaswini Umesh Soni secured Merit Rank #8 In S/2020 examination conducted

			by RTM Nagpur University.
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B- Merit Position of PG Students in RTMNU (for PG Dept. only)

5. Students Progression:

Year	No. of students enrolling into higher Education	Program graduated from
2021	UG to PG	06
	PG to Research	--
	Placement	03
	On campus	--
	Off campus	03

(i) Students' publication in Extracurricular activity

Title of the Paper	Name of Author	Title of journal	Year of publication

(ii) Students' Extension Activity

Sr. No.	Name of Student	Participation
1.		
2.		

(iii) No. of Students pursuing higher course

(iv) Students' participation in seminar

Student of M.Sc. Sem IV Physics participated in conference

Sr. No.	Name of Students	Conference type	Participation as
1.			
2.			
3.			

(v) Students' Learning course through-on-line

6. Faculty

I. Research Paper Publications

A. Total Number of publications:

- i) International __03_____
 ii) National __0_____

B. Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citation
Special Relativity using Perplex Numbers,	S W Anwane	Adv Appl Sci Res Vol. 12 No. 4:16	2021		Shri Shivaji Education Society Amravati's Science College, Nagpur	
Synthesis and Photoluminescence study of Strontium salts with 2-Methyl-8-Hydroxyquinoline and 8-Hydroxyquinoline	C Ruchir Kumar, Y. M. Nimje and S.W.Anwane	Journal of Physics: Conference Series	2020		Shri Shivaji Education Society's Science College, Nagpur	
Correlation of dynamical disorder and oxy-ion diffusion mechanism in Dy, W co-doped La ₂ Mo ₂ O ₉ system: Electrolyte for IT-SOFCs,	Ruhi Nazz, Vishwajit M Gaikwad, Vasant Sathe, Shyamkant Anwane and Smita A Acharya	Dalton Trans.,ROYAL SOCIETY OF CHEMISTRY	2020		Shri Shivaji Education Society's Science College, Nagpur	

C. Faculty participation in conferences/seminar/workshop and symposia:

Name of the Faculty	Title of Conference/ Seminar/ workshop Attended	Period	Level International/ National/State /University /College	Whether Presented papers	Whether abstract /paper published in Souvenir/Abstract Book

Dr. G. L. Jadhav	“Optical Properties of Cobalt ferrite Thin-film Prepared by Spray Pyrolysis Technique”	13th – 16th Feb 2020	International	Oral Presentation	No
Dr. G. L. Jadhav	The Indian Science Congress Association, Kolkata, Sponsored <i>National Conference on Science and technology: Rural development (Sustainable Development through Science and technology.)</i>	27 – 28 Nov, 2019	National	No	No
C Ruchir Kumar, Yogesh Nimje, Sagar S. Paikmare, and Shyamkant Anwane	Designing of computer aided Thermogravimetric Analyzer using Arduino UNO				

D. Awards to Faculty members

7. MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Date of MOU	Organization	Purpose/Activity	Student Participate under MOU

8. Research funds sanctioned and received from various agencies, industry and other organizations

Nature of the Project	Duration	Name of funding Agency	Amount Sanctioned	Amount Received

9. Books Published

Sr. No.	Book		Book Edited
	Title	ISBN and Date	Chapter
1	The Special and General Theory of Relativity Published by KDP,	ISBN:9798539250829	

	Amazon		

10. Research Guidance by Faculty during the year

Name of the guide	Ph. D		
	Awarded	Submitted	Registered
Dr S W Anwane*	--	02	--

* (i) Mrs. Chaitali Keche Pangul submitted Ph.D. thesis entitled **Photoluminescence properties of Rare Earth Ion Doped ZnO Nano-fibres**. Date of Registration 14/05/2015 and Thesis submitted on 3/8/2019.

(ii) Ms Ruhi Naz submitted Ph.D. thesis entitled *Understanding of oxy-ion conductivity of $La_{2-x}A_xMo_{2-y}B_yO_{9-\delta}$ system: in view of electrolyte for IT-SOFCs* was Registered for Ph.D. programme on 12-01-2017 and thesis submitted to RTM Nagpur University on 30-8-2021

11. Alumni engagement

a. Contributes significantly to the development of the institution through financial and other supports

b. alumni contribution during the year

12. Action Plan of the Department

- (i) To achieve excellence in online teaching
- (ii) To achieve excellence in online practical
- (iii) Extension activity – Shivaji Space Explorer Club, Visit to RSC

13. Best Practices of the department

- (i) Conducting regular Students Seminar
- (ii) Closely monitoring students and accordingly rewarding marks for tests, attendance, assignments and performance in practical.
- (iii) Encouraging projects leading to devices and working models

14. SWOT Analysis

S-conductive atmosphere, openness for activities, good infrastructure, supporting staff, Sophisticated Instrumentation Laboratory, Physics Society – a platform for all stake holders, e-resource created by all faculty members.

W-lack of human resource (teaching & non-teaching), lack of interest shown by students, lack of supply of chemicals & glassware for project & research activity, poor placement in Physics.

O-exploring Sophisticated Instrumentation Laboratory, Wide diverse area of applications can attract students & teachers interest, excellent instrumentation facility, Research Grants can be brought as we are 2(f) and 12(B).

T-due to COVID-19 condition students have less interest in laboratory work, students projects are seriously affected, extension and Physics Society activities are affected.