



N.V. Society's

**N.V. ARTS, SRI KANHAYALAL MALU SCIENCE &
DR. PANDURANGRAO PATKI COLLEGE OF COMMERCE,
KALBURAGI - 585 103 . (Karnataka)**

PROFILE

of

DEPARTMENT OF PHYSICS

2021-22

Submitted By:

Dr. SHRIKANT EKHELIKAR

Associate Professor and Head,

Department of Physics

N V Degree College, Kalaburagi

PROFILE

INTRODUCTION

Nutan Vidyalay Society's N V Arts, Sri Kanhyalal Malu Science and Dr Pandurangrao Patki College of Commerce, Kalburagi, established in the year 1979, had only two faculties Arts and Commerce till 1987. The success of Arts and Commerce faculties and the continuing demand of parents and students for science education inspired the society to extend and expand its educational activities by starting science faculty in the year 1987. The Department of **Physics** was started since the inception of the Science Faculty. In the beginning the Science Faculty had the following combination:

Physics, Mathematics, Electronics

The Science Faculty began with a modest strength of 11 students and 6 teachers. **Computer Science** and Mathematical Statistics were introduced as an additional combinations from the year 1990. Now as per students demand additional combination with **chemistry** is also provided from the academic year 2009-10.

At Present students have options for combinations as below:

- 1. PHYSICS, MATHEMATICS, ELECTRONICS.**
- 2. PHYSICS, MATHEMATICS, COMPUTER SCIENCES.**
- 3. PHYSICS, MATHEMATICS, MATHEMATICAL STATISTICS.**
- 4. PHYSICS, MATHEMATICS, CHEMISTRY**

Now the present student strength of department is 300. Department has **Three** qualified teaching staff, one non teaching and sufficient infrastructure. Laboratories are spacious - one **Optics laboratory** (7.5x 3.0mtrs.), **General lab I** (7.5 x 19.90mtrs.), **General lab II** (7.5 x 19.90mtrs.) and a **storeroom** (1.50x7.5mtrs). Department has a **Research laboratory size** 7.5 x 4.0 mtrs. Important equipments such as hydraulic ring die press, DC conductivity, Furnace(Indfurr) and dielectric measuring instruments have been procured under **UGC Minor research projects and UGC XI plan** equipment grants.

Student Strength: 2020-21

Semester	Boys	Girls	Total
BSc I	38	31	69
BSc III	57	48	105
BSc V	52	41	93
			267

Student Strength: 2021-22

Semester	Boys	Girls	Total
BSc I	25	10	35
BSc III	38	31	69
BSc V	57	48	105
			209

Conduct of Classes:

Theory and Practicals: Conventional teaching –chalk and talk method is adopted.

To enhance subject understanding **Multimedia teaching techniques** are also used in teaching programme. Regular teaching is well supplemented by use of ICT classes.

Curriculum Development:

Staff members of the Department are involved extensively in framing syllabus for UG Physics curriculum during “**workshop on introducing semester system held at Department of Physics, Gulbarga University, Gulbarga on 19th & 20th September 2003**” . Semester system was introduced from year 205-06 and C B C S system introduced from year 2018-19.

Now from this academic year as per NEP2020 National education policy syllabus was modified and introduced for BSc I SEM from 2021-22 academic year. Some staff members are on BOS penal in Physics thereby involved in curriculum development/modification.

Dr Shrikant Ekhelkar BOS member Physics has contributed in framing syllabus for CBCS system BSc Vth sem Solid state Physics Paper in 2018-19. Also contributed in modification of Physics NEP2020 syllabus as BOS member.

Certificate Course in Physics :

A certificate Course in Basic Experimental laboratory skills is started from academic year 2019-20 as value addition to the students.

Evaluation:

Students knowledge in the subject is tested by conducting two internal tests , Class Seminars and group discussions.

Seminars: Class Seminars:

Students were given different topics of study and present a seminar paper in the classroom.

Seminars Presented by Students

2015-16

Sl No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Ramya S Tantri	Bsc III sem	Energy sources	12-09-2015	Dr Shrikant Ekhelikar	
2	Sunita S K	Bsc III sem	Magnetostatics	12-09-2015	Radha V K	
3	Aishwarya V	Bsc III sem	Vectors	25-08-2015	Dr Shrikant Ekhelikar	
4	Ashwini A K	Bsc VI sem	Transistors	05-01-2016	Sripad Joshi	
5	Bhargavi N Joshi	Bsc VI sem	Oscillators	05-01-2016	Sripad Joshi	
6	Vijaylaxmi S K	Bsc VI sem	Communication	05-01-2016	Dr Shrikant Ekhelikar	
7	Poornima R K	Bsc V sem	Solar Cell	15-09-2015	Sripad Joshi	
8	Ashwini A K	Bsc V	Raman Effect	14-09-2015	Radha V	

		sem				
9	Bhargavi Joshi	Bsc V sem	Atomic structure	15-09-2015	Radha V	

2016-17

SI No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Sunita S K	BSc V Sem	Atomic spectra	20-09- 2016		
2	Vaishnavi D S	BSc IV Sem	Interference	04-02- 2017	Dr Shrikant Ekhelikar	
3	Renuka NI	BSc IV Sem	Optical Instruments	05-02- 2017	Dr Shrikant Ekhelikar	
4	Akshata S Kulkarni	BSc VI Sem	Amplifiers	03-03- 2017	Sripad Joshi	
5	Sunita S K	BSc VI Sem	Oscillators	04-03- 2017		
6	Ambuja P T	BSc VI Sem	Crystal Structure	05-03- 2017		

2017-18

SI No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Anita M Nandi	BSc V Sem	Magnetic Materials	23-08- 2017	Radha V K	
2	Vidyasagar	BSc V Sem	Molecular spectra	24-08- 2017		
3	Ritusha V K	BSc III Sem	Scalars and Vectors	11-08- 2017	Dr Shrikant Ekhelikar	
4	Ambarish P H	BSc III Sem	Scalars and Vectors	11-08- 2017		
5	Varsha G P	BSc III Sem	Gradient and	18-08- 2017		

			Divergence			
6	Pavankumar R K	BSc III Sem	Curl and Guass theorem	18-08- 2017	Sripad Joshi	
7	Aishwarya H K	BSc III Sem	Vector Identities	17-08- 2017		

2018-19

Sl No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Basamma	BSc III Sem	Basics of Electromagnetism	01-10-2018	Dr Shrikant Ekhelkar	
2	Aishwarya	BSc III Sem	Fardays Law and Lenz law	01-10-2018		
3	Anjali	BSc III Sem	Introduction to vectors Algebra	27-09-2018		
4	J Kartik Naidu	BSc III Sem	Energy Resources	27-09-2018		
5	Vaishal S U	BSc V Sem	G P Thomson EXperiment	28-09-2018		
6	Vanishree S M	BSc V Sem	Millikans oil drop experiment	29-09-2018		
7	Ashwini A	BSc V Sem	Dumpsters Method	29-09-2018		
8	Priyanka R M	BSc V Sem	Raman Effect	30-09-2018		
9	Akshata B	BSC V Sem	Vibration Rotational Spectra	30-09-2018		
10	Pavankumar R M	BSc V Sem	Pure and Rotational Spectra	28-09-2018		
11	Pavitra S T	BSc V Sem	Uncertainty Principle	01-10-2018		
12	Rekha S M	BSc V Sem	Meissner effect	01-10-2018		
13	Basamma	BSc V	Schrodinger	28-09-2018		

		Sem	equation			
14	Ramya R K	BSc V Sem	Frank Condon principle	03-10-2018		
15	Ritusha V K	BSC VI Sem	Nortan Theorem	13-02-2019		
16	Varsha G P	BSc VI Sem	Thevinian Theore	12-02-2019		

2019-20

SI No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Pooja Ashok R	BSc V Sem	Compton Scattering	22-08-2019	Dr Shrikant Ekhelikar	
2	Sayyed Shebaz	BSc V Sem	Franck Condon Principle	22-08-2019		
3	Anilkumar Peerappa	BSc III Sem	Schrodinger wave equation	23-08-2019		
4	RAGhottamR J	BSc III Sem	Super conductivity	23-08-2019	Sripad Joshi	
5	Priyanka N B	BSc III Sem	Astrophysics	06-03-2020		
6	Aishwarya V	BSc III Sem	Solar Cell	06-03-2020		

2020-21

SI No	Name of student	Class	Topic of seminar	Date	Teacher	
1	Harsha Vardhan Reddy	BSc VI Sem	Radioactivity	9-10-2021	Dr Shrikant Ekhelikar	
2	Malvika Pujari	BSc VI Sem	Cyclotron- Principle &	12-10-2021	Dr Shrikant Ekhelikar	

			Working			
3	Bhavani Mane	BSc VI Sem	G M Counter Principle & Working	12-10-2021	Sripad Joshi	
4	Apoorvabhagya	BSc VI Sem	Nucleus- Genral Properties	12-10-2021	Dr Shrikant Ekhelikar	
5	Pooja N K	BSc IV Sem	Yongs Double slit experiment	11-10-2021	Sripad Joshi	
6	Aporva D T	BSc IV Sem	Birism Principle & Workin g	11-10-2021		

2021-22

SI No	Name of student	Class	Topic of seminar	Date	Teacher	
1	HArshit K	BSc V Sem	Nuclear energy	11-2-2022	Dr Shrikant Ekhelikar	PPT
2	Srivatsa Sirdeshpande	BSc V Sem	LiFUi Technology	11-2-2022	Dr Shrikant Ekhelikar	PPT
3	Sampada D	BSC III Sem	Nano materials	11-2-2022	Sripad Joshi	PPT
4	VAishanvi	BSC III Sem	Space technology	11-2-2022	Radha VK	PPT
5	Muktambika	BSc I Sem	Rigid body Dynamics	11-2-2022	Radha VK	Black Board
6	Laxmikant	BSC I Sem	Elasticity	7-3-2022	Radha VK	Black Board

Student Activities

1. Sripriya Pratinidhi BSc V SEM Participated in the program “Mahile mattu Vijnan” organized by KRVP bagged Ist place
2. Sunita K BSc IV Sem Participated in the Elocution competition organized by smt V G Womens college for celebration of National Science day on 09-09-2016 Bagged Second Prize
Dr Shrikant Ekhelikar Sri Sripad joshi and Radha V K guided students
3. Vaishanavi Jahagirdar and Vaishanavi Joshi BSc VI Sem Participated in science exhibition organized by KRVP Bangalore Bagged consolation prize
Dr Shrikant Ekhelikar and Sri Sripad Joshi guided students
4. Omkar P W BSc V Sem Participated in dist level kannada lecture competition. And Bagged I prize got selected for state level competition Topic: Hydrogen as future fuel
5. AJaykumar B BSc IIISem Participated I INNOVATION FESTIVAL organized by dist science center got First Prize for invention of Hybrid bike
6. Omkar P W BSc V Sem Participated in dist level kannada science lecture competition.
7. AJaykumar B BSc V Sem Participated in National workshop cum training on solar cell technology conducted by Dept of Physics SB College of Science college in association with IIT Madras on 5th and 6th oct2019
8. Ajaykumar B BSc VI Sem Participated innovation festival org by dist science center kalaburagi bagged I prize solar hybrid bike
9. Ritush V K and Aishwarya H K BSc V Sem participated in a quiz competition organized by V G Women college kalaburagi KSTA Bangalore II Prize 28-08-2018
Dr Shrikant Ekhelikar and Smt Radha V K are guide Teachers
- 10 Students participated in INNOVATION FESTIVAL scheduled on 21 to 23 rd Jan 2020 . Ten students along with one staff Sri Sripad Joshi participated in the event.
- 11 On 12 the Feb2021 our college students participated in Science exhibition competition 14 students in & teams participated in the event . First and second prize won by our college students. And Participated on 2nd March 2021 in State level science exhibition competition at Bangalore. Sri Sripad Joshi guided the students.

Extension Activity :

On 26th December 2019 Our physics student and staff in association with District science centre worked very hard to demonstrate to public on SOLAR

ECLIPSE and arranged to facilitate safe viewing through TELESCOPE at District Science centre.

Extension activities:

Teachers of the Department are actively involved in extension activities apart from the regular teaching, by organizing Science programmes.

National Science day is regularly celebrated on 28th Feb every year . On 1-3-2007 it was celebrated on large scale students of various colleges presented papers. Akshata S of BSC II Sem of our college presented paper on **Life and works of Sir C V Raman**. On 8-3-2008 **National Science Day** was celebrated in **collaboration** with Dr P S Shankar Prtisthana .Many Eminent Scientists Dr P S Shankar, Dr B N Joshi, Dr V M Jali and many others motivated students by their lectures. On 28th Feb 2012 National Science day was Celebrated with a view to educate students and create awareness about the hazards of **Nuclear radiation and use of clean Fuel**. Dr Sudhindra Haldodderi and Sri Nagesh Hegde two eminent scientist and scientific Writers were invited to deliver special lectures . This programme was organized by department of physics in association with Karnataka Science and technology department KSTA Bangalore and Dr P S Shankar Pratisthan Gulbarga and **Raman Science Academy** of our department.

Special Programmes organized:

- 1) **Dr R G Kulkarni** , Emiretus Professor (Rtd), Sourashtra University, Rajkot Gujarat
Delivered invited talk on Nanotechnology and Applications during Inauguration of COP classes on 2010 Feb 9
- 2) On 11th March 2012 **Dr SN Mulge** Prof department of Applied electronics delivered special lecture on Microwaves Applications.
- 3) **Celebration of 100 years of noble Prize to Madam Curie** and Celebration Of IYC2011 In association with Vision Group on science and Technology Govt of Karnatka and N V Degree college, Gulbarga organized One Day Programme for high School Students 300 students and 30 teachers benefited from this programme.
- 4) **Organized Division Level (Bidar, Kalburagi,Raichur and Yadgir) Inter collegiate Competition for Degree Students Science Exhibition- Sponsored by Karnataka VIjyanan Parishat , K STA Bangalore, Department of Collegiate**

education, Govt of Karnataka Bangalore and N V Soceity on 12-2-2021 200 students and 40 exhibits participated

National Seminar with UGC support:

Department of Physics has organized "National Seminar on Promotion of Basic Sciences" sponsored by South western Regional Office Bangalore on 23rd and 24th march 2005. The highlight of the seminar was presence of Prof S V Subrhamanyam, Head, Physics department, IISc Bangalore.

Raman Academy Activities:

General Knowledge TEST for Celebration of National science Day

2012-13

1. Raghavendra K Deshpande BSc VI Sem
2. Vasanti V G BSc Vi Sem

2014-15

1. Abhishek Singh BSC IV Sem
2. Vivek Paul and Satish BSc VI Sem
3. Anupama Kulkarni BSc VI Sem

2015-16

1. Vaishnavi D Suganadhi BSc II Sem
2. Anita M Nandi BSc II Sem
3. Archanan Ashok BSc II Sem

Progression to Higher Education:

1. Sommeshwar Hallikhed MSc M Tech Delhi IIT
2. Chandraprabha Bhat MSc PHD GuG(2018)
3. Shipa Bhandare MSc PhD GUG(2021)
4. Raghavendra Deshpande MSc PhD CUK
5. Shrikant Utagi MSc PhD CUK Poorna Prajna institute Bangalore

Slow and Advance learners:

The Department takes a special interest in encouraging bright students to achieve ranks and higher scores through counselling and providing them extra textbook to each student (Top 5).

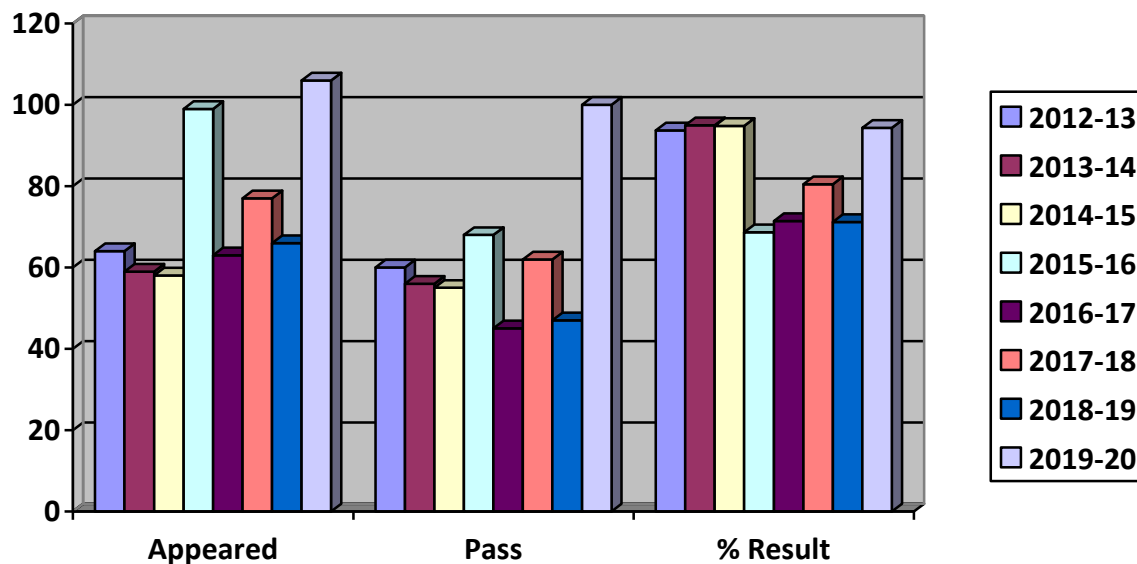
The students who are weak in the subject are identified and special care is given by conducting extra classes, repetition of practicals and providing notes and reference books. It is seen that they try their level best to come to the above average level.

Extra Curricular activities:

The students are encouraged to participate in extra curricular activities . Students are also encouraged to participate in Science exhibitions. A competition for science lecture in kannada is organized by Karnataka Rajya VIjnanan PARishat KRVP and department of collegiate eructation Govt of Karnataka every year at University and State level, we guide and prepare our students to participate . Many of sour students represented and selected t at state level. Students are also encouraged to take up group projects.

B.Sc. Final year/ VI SEM results :

Year	Appeared	Pass	% Result	Ranks
2012-13	64	60	93.75	
2013-14	59	56	95	
2014-15	58	55	94.82	
2015-16	99	68	68.68	
2016-17	63	45	71.42	
2017-18	77	62	80.5	
2018-19	66	47	71.21	
2019-20	106	100	94.33	



Library:

The central library of college has 750 Physics books and following journals for physics students:

A Special section is allotted for research students with reference books and journals

- 1) Bulletin of Indian Association of Physics Teachers.
- 2) Physics News
- 3) Bala Vigyan
- 4) N LIST E journals and e books

Research and Publications:

The teachers of the department are actively engaged in research. The teachers have attended refresher courses and orientation courses and Research training programmes. Dr Shrikant Ekhelikar, Associate professor in Physics has published Papers in National and international journals.

National Journal 06

International journal 06

Seminar/ Conference 14

Total Publications 26

Minor research Project UGC 02 completed

Average impact factor is: 0.88

Life Memberships:

- 1) **Indian Solid State Ionics Society (I.S.S.I.S.) Banaras Hindu University**
 - 2) **Materials Research Society of India (MRSI LMB673) Bangalore**
 - 3) Indian Association of Physics Teachers' (I.A.P.T.LM734).
 - 4) Indian Physics Association (I P A GEN/LM/12001) Mumbai
 - 5) Electrochemical Society of India I I Sc Bangalore
 - 6) Karnataka Rajya Vigyan Parishat (K.R.V.P.D32). Bangalore
-
- 7) Gulbarga University Private College Teachers' Association (GUPCTA).
 - 8) Marathi Sahitya Mandal Gulbarga
-

Research Training:**Dr. Srikant Ekhelikar has undergone following trainings:**

- Worked in the Department of Metallurgical Engineering and Materials Science, **I I T Powai, MUMBAI** on Impedance Spectroscopic measurements Using HP4192 impedance analyser under guidance of Prof A R Kulkarni from 3 -6-1995 to 13-6-1995
- International Research Training workshop Organized by Department of Physics **Banaras Hindu University Varanasi** 22-11-98 to 28-11-1998
- **International School on Crystal Growth of technologically** Important materials Organized by Dept of Geology, University of Mysore, Mysore 20-1-2003 to 28-1-2003.
- National workshop on Advanced Methods for Materials Characterization organized by **BARC Mumbai** from Oct 11-15, 2004
- Participated in National workshop-symposium on Recent developments in Conducting Polymers Research and Device Applications sponsored by **DST at CECRI, Karaikudi (TN)** from 26-30th June 2006

Research Publications:

Dr. Srikant Ekhelkar has published the following Research papers:

1. **Shrikant Ekhelkar** and G K Bichile “The Structural investigations of the non-stoichiometric solid solutions(Bi_2O_3)_{1-x}(M_2O_3)_x (M=Y,La, Pr ,Nd,Gd and Dy)” **Ionics journal vol.10(2004)118** .
2. **Shrikant Ekhelkar** and G K Bichile “Synthesis and structural studies of (Bi_2O_3)_{1-x}(Y_2O_3)_x and (Bi_2O_3)_{1-x} (Gd_2O_3)_x solid solutions ” **Bull .Mater. Sc. Vol.27, No.1, Feb. 2004, pp 19-22**
3. **Shrikant Ekhelkar** and G K Bichile "Stabilization of fluorite structured bismuth oxide based solid electrolyte and transport properties" presented at National conference on Emerging materials and technologies organized by Department of Physics, S V University, TIRUPATI CEMAT-2004. Aug 3-4,2004.
4. **Shrikant Ekhelkar** and G K Bichile “Synthesis and structural studies of (Bi_2O_3)_{1-x} (Dy_2O_3)_x and (Bi_2O_3)_{1-x} (Pr_2O_3)_x binary systems” **Indian Journal of Pure and applied Physics** Vol 42, Dec 2004, pp.912-915
5. **Shrikant Ekhelkar** , K M Jadhav and G K Bichile “Synthesis and Characterization of (Bi_2O_3)_{1-x}(La_2O_3)_x oxygen ion conducting binary system” Proc. 49th DAE SSPS 2004 symposium(26,30th Dec.2005) at Guru Nanak Dev University, Amritsar pp 969-970
6. S B Jaiswal , **Shrikant Ekhelkar**, K M Jadhav and G K Bichile “Characterization of CuInS_2 thin films prepared by spray pyrolysis” Proc. 49th DAE SSPS symposium at G ND Uni, Amritsar. (26,30th Dec.2005) pp 800-801
7. Faud A G., Dengle R T, **Ekhelkar Srkant**, Jadhav K M and Bichile G K “Structural and magnetic properties of Ni doped Lithium ferrite system ” presented at 92nd Indian Science Congress, Hyderabad , January 3-7, 2006
8. **Shrikant Ekhelkar**, K M Jadhav and G Bichile “Synthesis and Transport properties of (Bi_2O_3)_{1-x} (Dy_2O_3)_x and (Bi_2O_3)_{1-x} (Pr_2O_3)_x binary systems” Presented at National Conference on Advanced materials AMS07 at Materials Science Department, Gulbarga University, GULBARGA from 28 and 29th Jan 2007
9. **Shrikant Ekhelkar**, Anilkumar Koppalkar, G R Badiger and M V N Ambika Prasad “Synmthesis and Characterization of PANI-Nd₂O₃-Al₂O₃ composites at National conference on material Characterization of technologically important materials” at Dr B A Marthwada University Aurangabad. 29-31 , Jan 2007
10. Ameena Parveen, Koppalkar Anil Kumar , M. Revanasidappa , **Shrikant Ekhilkar** and M.V.N Ambika Prasad “Dielectric Spectroscopy of Pani-CaTiO₃ Composites” **Ferroelectrics** 377 , 1(2008) 63-74 **Taylor and Francis UK**

11. Ambika Prasad MVN, Ameena Parveen S Soudagar, Anilkumar R Koppalkar, **Shrikant Ekhelikar** Synthesis and Electrical Properties of Pani - ZrO₂ Presented at National Conference on Green Chemistry organized by Dept of Chemistry, Kakatiya University, Warangal (Andhra Pradesh) on 1st, 2nd Feb 2008
12. K. Sangshetty^a, Anilkumar R. Koppalkar, M. Revansiddappa, **Shrikant Ekhelikar** And M.V.N. Ambika Prasad, Dielectric spectroscopy of polyaniline–Dy₂O₃ composites **Physica B: Condensed Matter** Volume 404, Issues 14-15, 1 July 2009, 1883-1886
13. Ambika Prasad MVN, Ameena Parveen S Soudagar, Anilkumar R Koppalkar, **Shrikant S Ekhelikar** Synthesis and Electrical Properties of Pani - SrTiO₃ Presented at National Conference on Recent Trends in nano science and Green Chemistry organized by S S Margol College, SHAHABAD on 23rd and 24th Oct 2009.
14. Ambika Prasad MVN, **Shrikant S Ekhelikar and Ramesh Patil** Synthesis and Electrical Properties of Pani - Ni ferrite composites Presented at National Conference on Recent Trends in Nano science and Green Chemistry organized By S S Margol College, SHAHABAD on 23rd and 24th Oct 2009
15. Synthesis, Characterization and DC conductivity studies on polyaniline doped with nano-CuO, Srikant Ekhelikar, Aashis S. Roy, Koppalkar R. Anilkumar, **Ramesh Patil**, and M.V.N Ambika Prasad; **Bionano Frontier**, 1(2010) 6
16. Studies on Fourier Transform Infrared Spectroscopy, Scanning Electron Microscope, and Direct Current Conductivity of Polyaniline Doped Zinc Ferrite, **Ramesh Patil**, Aashis S. Roy, Koppalkar R. Anilkumar, **Srikant Ekhelikar**, *J. App. Poly. Sci*; **121(2011) 262.**
17. Electrical conductivity of PANI/NiZnO₃ composites: A solid state electrolyte, **Ramesh Patil**, Aashis S. Roy, Koppalkar R. Anilkumar, **Srikant Ekhelikar**, **Ferroelectrics** Vol. 423(1-9) (2011)
18. Dielectric and AC conductivity behavior of PANI/ZnFe₂O₄ composites, **Ramesh Patil**, Aashis S. Roy, Koppalkar R. Anilkumar, K.M.Jadhav, Srikant Ekhelikar, **Composites Part B: JCOMB-D-11-00328 (2012) published online**

Minor Research Project:

1. A UGC minor research project entitled "Synthesis, Characterization of Conducting Polymer Composites and their Microwave Applications" Sanctioned by UGC South Western Regional office Bangalore. Dr Srikant Ekhelikar is the Principal Investigator of project(X Plan) **Completed**
2. A UGC minor research project entitled "Synthesis, Characterization of Polypyrrole Composites and Humidity sensing studies" Sanctioned by UGC

South Western Regional office Bangalore. (XI plan) **Dr Srikant Ekhelikar** is the Principal Investigator of project. **Completed**

BIO-DATA

3. **Name:** Sripad joshi
4. **Father's Name:** Pandurangrao Joshi
5. **Date of birth:** 10.6.1971
6. **Date of appointment:** 1-08-2001
7. **Educational Qualification:** M.Sc M.Phil
8. **Designation:** Asst.Prof
9. **Department:** Physics
10. **E-mail id:** sripadjoshipv@gmail.com
11. **PAN No:** BAKPJ0739G
12. **M.Phil Topic:** Synthesis and comparative studies on conducting polymers, polyaniline and polypyrrole at vinayaka mission university under the guidance of Dr.Srikant Ekhelikar in the year Dec -2007

13.SEMINAR AND CONFERENCE

- 14.1. National seminar on “Advanced Functional Materials” Organized by the Department of physics, Gulbarga University Gulbarga on 19,20 march 2012.
- 15.2. International year of crystallography, IYCR-2014 organized by Department of Physics Gulbarga university Kalaburagi sponsored by Vision Group of science and technology Bengaluru and Gulbarga university Kalaburagi.
- 16.3. National conference on “Advances in Biodiversity, science, Engineering and the Environment” held at M.S. Irani Degree college of Arts, Science & Commerce, Kalaburgi in a association with natural Biodiversity conservation society, Bidar, Bhalki & Deccan environmental Research Organization, Vijayapur Karnataka, held on 17th feb 2016 .
- 17.4. Selected as judge at the Distric science center and DIET, kamalapur jointly organized Taluk level Science fair on 18 nov 2016.
- 18.5. Selected as Judge at Distric Science center and DIET, kamalapur jointly organized Science exhibition on 17 and 21 nov 2017.
- 19.6. N V Society’s Jog- shete Science Center and Forest Department, Kalaburgi Organized a workshop on “Planning to make Gulbarga Green” and participated on 21 July 2018.
- 20.7. Participated as guide teacher in university level kannada science lecture compitation for degree students in physics subject on 22 sep 2018 held at Reshmi degree college kalaburgi
- 21.8. karnataka Rajya Vgyan Parishad had organized 12th state level kannada science conference on 13th, 14th and 15th Dec 2019 at Dr.Ambedkar Bhavan GUG Kalaburagi.
- 22.9. Observed total solar eclipse with students at Disrtic science center klaburgi on 26 dec 2019.
- 23.10. International conference on Physics and Allied science organized by BVB College Bidar on 11, 12,13th ^{March} 2020.
- 24.11. KRVP has organized District Divisional level science exhibition at N.V. Degree College on 12th February 2021

25.12. KRVP has organized state level Science exhibition held at Bangalore central college on 2 and 3rd March 2021.

BIO-DATA

Name	Radha
Father's name	Sri. Vishnudasacharya
Designation	Asst.Proffessor
Department	Physics
Date of birth	22-03-1992
Date of appointment	01-01-2016
PAN No:	BUOPR5095K
Address College	Department of physics, N V Arts, Sri Kanhayalalmalu science,

Dr. Pandurangrao patki College of commerce,
Kalaburgi-585103

Residence

plot no 81A, H.No-11-425/6/A-1
“SREESHA NILAYA”
Near samata colony water tank,
Kalaburgi-585103

✚ Educational qualification

Class	Board/ University	Year of Passing	Subjects studied	Percentage and Result
S.S.L.C	KSEB Bangalore	April 2007	Kan- Eng-Hindi Maths-s.s-sci	87.36% Distinction
P.U.C	Department of pre-university Bangalore	April 2009	Physics-Maths Chemistry- Electronics	77.33% I class
B.Sc.	Gulbarga University	May 2012	Physics-Maths Electronics	80.94% I Class with distinction
M.Sc.	Central University of Karnataka	July 2014	Physics	76.41% O grade CGPA-5.50
B.Ed.	Gulbarga University	Jan 2016	Phy-Maths methodology	84.28% I class With distinction

✚ Additional information:

Email id: khajooriradha@gmail.com

Tel.No: 08472-242829

Mobil No: 9449428643

Languages known: Kannada, English, Hindi and Marathi

Computer skills: Basic, MS-Office

+ Teaching experience:

Assit.prof. in physics for degree 6 years

+ Extracurricular activity:

Participated as a guide teacher in **YOUTH FESTIVAL** of GUG organised by GUG and Govt. first grade college Afzalpur on 26, 27, and 28 Oct 2016(2016-17)

Participated as a guide teacher in **EDUCATIONAL TOUR** organized by FINE ART department N V Degree College kalaburgi, visited Aurangabad.(2017-18)

+ Refresher's course:

“Science academies 67th Refresher's course in experimental physics”

From 6 Jan to 22 Jan 2015 at Central University of Karnataka, kalaburgi.

+ Seminars attended/ workshops/conferences attended:

- ❖ **“INTERNATIONAL YEAR OF CRYSTALLOGRAPHY-2014”**
Organized by Dept. of physics Gulbarga University, Kalaburgi
Sponsored by Vision group of science and technology, Bengaluru on 27 and 28 March 2015(2014-2015)
- ❖ **“EVOLVING TRENDS AND CHALLENGES IN SCIENCE EDUCATION AND RESEARCH-AN EXPLORATION”**
UGC sponsored National Conference in Basaveshwara College of commerce, Arts and science-Bangalore on 29 and 30 Jan 2016(2015-16)
- ❖ **“PLANNING TO MAKE GULBARGA GREEN”**
Organized by Forest department, kalaburgi and N V Society's Jog – shete science center, kalaburgi on 21 July 2018(2018-19)
- ❖ **“VIJNANA MELA”** organized by KSTA, Bangalore and smt V.G.DEGREE College for women, kalaburgi on 28-08-2018(2018-19)
- ❖ **“UNDERGRADUATE CBCS PHYSICS CURRICULUM-2018”**
Organised by Dept. of physics, Gulbarga University, Kalaburgi on 23-10-2018.
- ❖ **“12th AKHILA KARNATAKA KANNADA VIJYANA SAMMELANA”**
organized by Karnataka rajya vijyanaparishattu and GUG, Kalaburgi on 13, 14, 15 december 2019.
- ❖ **International Conference on Physics and Allied sciences (ICPAS-2020)**
Organized by B V Bhoomraddi College of Arts, Science and Commerce, Bidar on 11th, 12th, and 13th March 2020.
- ❖ **Divisional level Science Exhibition for U.G. students organized by Karnataka**

rajya vijyanaparishattu, Department IT&BT and Science and technology along with Department of college education on topic of “Manukulakkagi vigyana, Tantragyana mattu Aavishkar” held at N V Degree college on 12th Feb 2021.

- ❖ One day national webinar on “**NEP 2020 and Preparation of UG and PG Syllabus and Subject contents in Physics**” held on 28th April 2021 Organized by the Department of Post Graduation Studies and Research in Physics, Gulbarga University, Kalaburgi.
- ❖ One day National Webinar on “**Pratibha P. Pai National Webinar On the Frontiers of Physics**” Organized by the Department of Physics, SIES college of arts, Science and Commerce, on 17th July, 2021.
- ❖ Two days International webinar on “**Recent Advances in Science And Technology**” Organized by Department of Physics and IQAC , Karmaveer Mamasheh Jagdale Mahavidyalaya, Washi, Dist:Osmanabad on **13th and 14th Nov2021.**

Research Laboratory:

1. The department physics has a separate research Laboratory. **Synthesis** equipments like Digital balance, Furnace 1500° C, Dynamic filtration system.
2. **Pallet** making machine Aimil India hydraulic Press
3. **Characterization** equipments: DC Conductivity, dielectric measurement setups, BH Curve tracer set up, PC based Nuclear G M Counting system
4. Hioki LCR meter 3532 42Hz to 1 MHz
5. Indfurr furnace for high temperature

Student Research project:

A small research project was proposed and carried involving group of students as investigators. The title of the Project is Bio diesel- Jatropha.

The students actually planted the sapling of Jatropa and now it is growing stage. The students also collected the information of possible processing steps in preparation of Biodiesel from the seeds of JATROPHA plant. Further the students visited the BIODIESEL

extraction unit in the Gulbarga University campus. They also carried out literature survey on the properties of jatropa oil. The funding for the above work was provided from the college.

Alumni of the Department:

- a) **Working in the Department of Physics;** Smt Radha V K
- b) **Working in the college:** Smt Barati S R, Lecturer in Electronics
- c) **Working in the sister institutions:** Sri Satish Umadi, Lecture in Physics, N.V.P.U. College, Gulbarga,

Mr Bharat K Lecturer N V BEd College,Gulbarga

Miss Roopa, Lecturer in Physics, N.V. Polytechnic College, Gulbarga.

- d) **Working in School: Vidyasagar Maths teacher**

e) Working Outside:

Sl. No.	Name	Qualification	Place/ Organisation.
1.	Sri. Hanumesh. V.J.	M.Sc., M.Phil	System Analyst, Infosys, Bangalore.
2.	Sri Rajshekhar Gosal,	M.Sc., B.Ed.	Teacher, Govt. High School, Aland.
3.	Sri. Someshwar Hallikhed	M.Sc., M.Tech.	Project Manager, SUBEX Systems, Bangalore.
4.	Sri. Vinod Kandkur	M.C.A	Software Engineer, Philips India, Bangalore.
5.	Smt. Namrata Arankal,	M.C.A	Software Engineer, Tata Honey-Well, Pune.
6.	Sri. Jayteerth Patil,	M.Sc.	System Support Engineer, Wipro, Bangalore.
7.	Sri. Girish Kulkarni	B.Sc.	Wipro, Bangalore.
8.	Sri. Sharanabasava Bhajantri	B.Sc.	PSI, Gulbarga.
9.	Sri. Raghavendra Jahagirdar	B.Sc.	BSNL, Hassan
10.	Smt. Shalini Joshi	B.Sc.	LIC, Hyderabad
11.	Smt. Vani Joshi	B.Sc.	Head Post Office, Gulbarga.
12.	Smt. Vidya Arankal	B.Sc.	S.B.I. Gulbarga.
13.	Sri. Uday Honguntikar	B.Sc., LL.B.	Advocate, Gulbarga.
14.	Sri Mahesh Doejode	BSc	Event Manager,Mumbai
15.	S Mahadevan	BSc	AGM LIC hydrabad

16	S Ramesh BalaKrishnan	BSC MBA	Ten Sports Mumbai
17	Shankar I V	BSc	SBI bank Gulbarga
18	Vandana Jahagirdar	MSc	Krishna Grameena Bank Andola
19	Bhargavi Kulkarni	BSc	KVJ Bank Gulbarga
20	Ravichandra.c	MSc	KGB

Innovative Practices

The department adopts many healthy practices.

- The students are guided to organize group discussions ,quiz ,Observation of Hiroshima day and National Science Day Celebrations Under Raman Science Academy .
- Students are guided to organize class seminars and preparation for participation in various extra curricular activities.
- Information about the scholarships/exams like Kishore Vigyana Protsahan Yojana of DST and CV Raman scholarship of Karnataka Government is brought to the notice of the students.
- Students are encouraged by giving cash prizes for securing highest marks in Physics (Instituted by faculty of the department).
- Guide and encourage students to participate in Science Exhibitions.
- Research facilities available in the department are extended to students for project work and MPhil / PhD work.

Important equipments procured in Physics Department under UGC XI Plan

Sl no	Particulars of equipment	Scheme	Year	quantity	Amount Rs
1.	He Ne laser source 2 mW	College grant	2003-04	01	17,000=00
2.	Hydraulic Ring die press AMIL make	UGC X plan MRP	2005-07	01	30,000=00
3	a) G M Counter Nucleonix make Hyderabad b) Radioactive source kit c) Detector	UGC XI plan Equipment Grant	1989-90(1) 2008-09(1)	02	16,000=00 25,000=00
4	DC conductivity set up Pushpa Scientific company Hyderabad	UGC XI plan Equipment grant	2008-09	01	28,000=00
5	Dielectric measurement set up Pushpa scientific company, Hyderabad	UGC XI plan equipment grant	2008-09	01	28,000=00
6	Aplab LCR Q meter Model 4100R	UGC XI plan COP add on course	2009-10	01	1,49,000=00
7	Digital Balance Citizen 0.01mg	UGC XI plan COP add on course	2009-10	01	69,000=00
8	Furnace INDFURR 1400 deg C	UGC XI plan COP add on course	2009-10	01	1,05,000=00
9	Ultrasonic interferometer for solids	UGC XI plan COP add on course	2009-10	01	30,000=00
10	Vacuum pump and filtration set up	UGC XI plan COP add on course	2009-10	01	20,000=00
11	Computer P-IV Printer	UGC XI plan COP add on course	2009-10	01	23,000=00
12	Fume Hood With working table 4 × 6	UGCXI Plan BSR grant	2009-10	01	55,000=00
13	Hioki LCR meter	UGCXI Plan Additional grants	2010-11	01	507600=00
14	Computer Dell Core I3	UGC XIPLAN Additional Grants	2010-11	02	42000=00

* **Major Equipments Available:**

- | | |
|---------------------------------|------------------------------|
| 1) Computer | 2) LCD DELL projector |
| 3) He-Ne laser source | |
| 4) Advanced optical Bench | 5) LB photometer |
| 6) GM counter | 7) Spectrometer |
| 8) Bi quartz polarimeter | 9) Cathode Ray Oscilloscope. |
| 10) Digital Function Generator. | |

11) Research equipments hydraulic press, DC Conductivity set up and dielectric set up Digital balance , Hioki LCR meter.

Details of Staff Members in the Department:

1) Name : **Dr. SRIKANT EKHELIKAR**

Designation : H.O.D. Dept of Physics

Educational Qualification: M.Sc. Ph.D.

Computer knowledge: PG Diploma in EDP CM.

Orientation : One

Refresher : 4

Research paper : 26

Research projects : Minor project Completed Two

Conference and Seminar : 30

2) Name : **Sri SRIPAD JOSHI**

Designation : Lecturer in Physics.

Educational Qualification: M.Sc. M Phil.

Conference and Seminar : Four

3). Name : **Smt Rada V K**
Designation : Lecturer in Physics.
Educational Qualification: M.Sc.
Conference and Seminar : Three

FUTURE PLAN OF THE DEPARTMENT:

The department has involved continuously in many student support activities till now yet it has some plans to be executed in the future for its overall development.

- 1) Research activities in the dept. to be strengthened by taking more research projects.
- 2) Projects to be handled by involving students of the department.
Involving students in the extension activities like
 - a. Concern for environment
 - b. History of scientific discoveries
 - c. Important astronomical events.
 - d. Renewable sources of energy
- 3) National level seminars/workshops to be organized