

DEPARTMENTAL PROFILE

Electronic Science Department

Vidya-Amrut Dnyan Pratishtan's

Arts, Science & Commerce College, Shirsondi.

Tal: - Malegaon Dist: - Nashik 423208, Maharashtra (India)

- **Aim:-**

To build technopreneurs and researchers to meet the needs of current technological advancements in the field of electronics.

Objectives:-

- To offer a thorough understanding of the scientific and technological aspects of electronics.
- To integrate into the student's thinking activity an ethical and professional perspective, excellent leadership abilities, and a dedication to social obligations.
- To encourage students to practice self-learning and use current tools to solve real-world challenges.
- To inspire pupils to become acquainted with current and recent technical advancements.
- To enhance expertise through activities such as industry visits, projects, symposiums, and other similar activities.
- To develop the attributes of students in the field of electronics as per the demand of industry and the market.

Arts, Science & Commerce College, Shirsondi

ELECTRONIC SCIENCE DEPARTMENT

1. Name of the department: ---- **Electronic Science**
2. Year of Establishment: ----- **2018**
3. Name of Programmes / Courses offered ----- **UG**
4. Annual / semester / choice based credit system ---- **Semester (choice based credit system)**
5. Participation of the department in the courses offered by the other departments. --- **Project Course of T. Y. B.Sc. (Chemistry Department).**
6. Courses in Collaboration with other university, industries, foreign institutions, etc. –**Some Students guided by industries for project activities.**
7. Number of Teaching posts -----

Post	Sanctioned	Filled
Assistant Professor	04	02

8. Faculty profile with name, qualification, designation, specialization, (SET/NET/Ph.D. etc.)

Name	Qualification	Designation	Specilization	No. of years of Experience
Dr. U. J. Tupe	M.Sc. SET, Ph.D.	Head of Department & Assistant Professor	Electronic-Science	09
Mr. R. S. Borse	M.Sc.	Lecturer	Electronic-Science	03

9. Publications:

Publication per faculty

- Number of papers published in peer reviewed journals (national / international) by faculty-
Dr. U. J. Tupe- 36
- Books Edited/Published ---- **02**

Books with ISBN / ISSN number with details of publishers ----

Title of Book	Publication	ISBN No.	Year of Publication
Book Title: E-waste: Management and Procurement of Environment Chapter Title: Impact of E-waste on Environment: Today and Future	AUTHORSPRESS, New Delhi.	978-93-90588-87-9	2021
Physics For CSIR- NET/SET(Theory & MCQ)	Vaishali Prakashan, Pune.	978-81-934781-8-9	First Indian Edition – Jan-2019

10. SWOC of the department ----

❖ **Strengths:**

- Staff is well qualified, talented, dedicated, knowledgeable and cooperative.
- Laboratory is well equipped.
- Research facilities are available in the laboratories.
- Faculty have published research papers in UGC care, National and International Journals.
- Numerous research/independent study opportunities for students
- Large number of students associated to department projects and events.

❖ **Weakness:**

- Inactive in research funding.
- Few internal seminars and special presentations.
- Difficult task to overall development of students because of lack of facilities.
- Need to involve more graduate students in research.

❖ **Opportunity:**

- Department always motivate students for the competitive examination and research activities.

❖ **Challenges:**

- To arrange the National and International level seminars.
- To develop the laboratories with well and latest research Facilities.
- The department is planning to increase the strength of UG students.

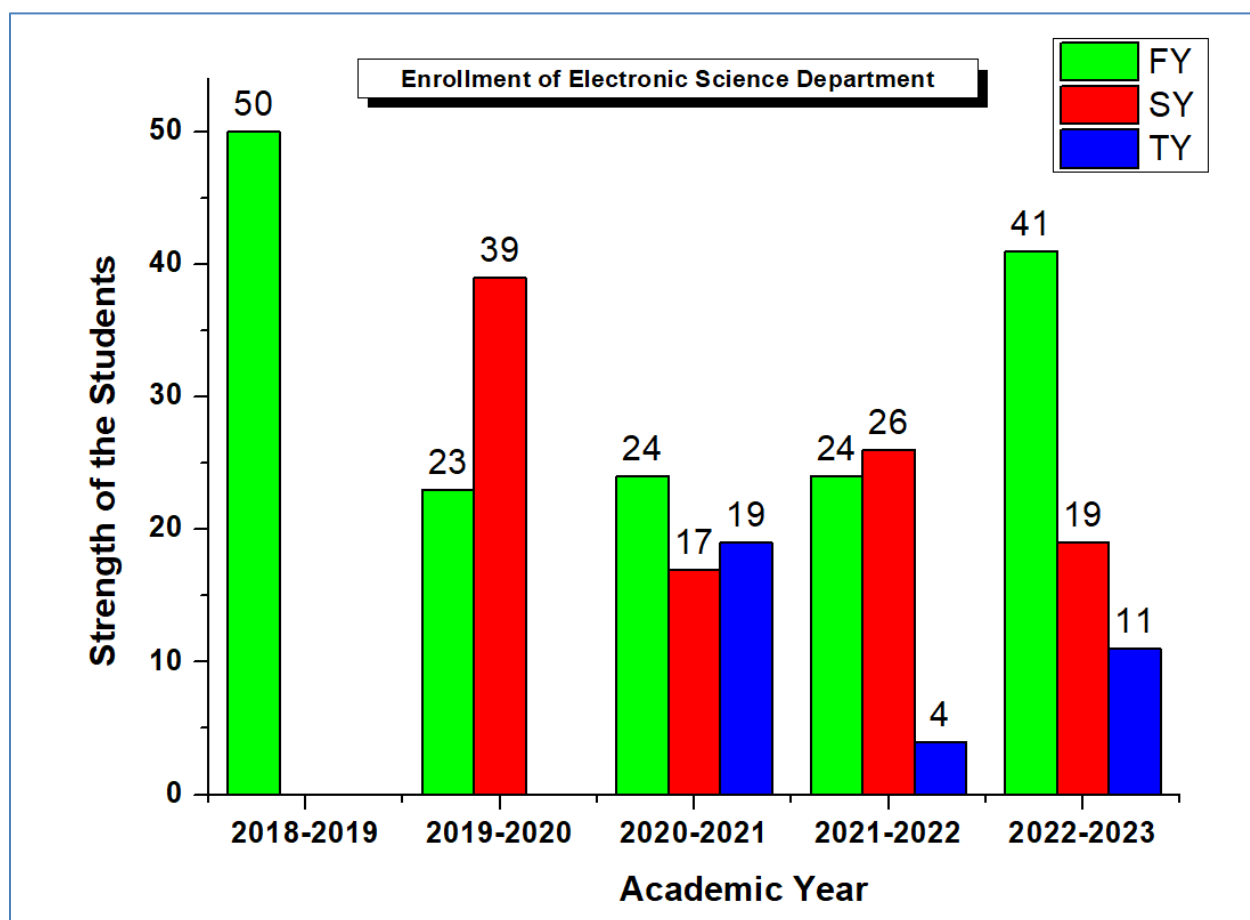
- To encourage the faculty to acquire SET, NET and Ph. D. degree.
- Contribute to rural development.

Electronic Science Department

Student strength year wise

Class	Academic Year				
	2018-2019	2019-2020	2020-2021	2021-2022	2022-23
F. Y. B. Sc.	50	23	24	24	40
S. Y. B. Sc.	-	39	17	26	19
T. Y. B. Sc.	-	-	19	04	11

Chart showing strength (enrollment) of the students:



FUTURE PLANS

- To start a job-oriented course.
- To generate facilities for research and paper publications for students and staff.
- To organize seminars and workshops for students.
- To sign MoUs with industry and institutes.
- Development of practical kits by students to enhance their practical knowledge.
- To start remedial courses for students development.

Teacher Profiles



Personal Profile

Name of the Teacher: **Dr. UMESH JAGANNATH TUPE**

Address: Samrat nagar, Bhadgaon Road, Chalisgaon.

Institute: VADP's Arts, Science & Commerce College, Shirsondi.

Date of Appointment: 01/02/2022

Department: Electronic Science

Designation: Head of Department and Assistant Professor

Date of birth: 14/11/1989

Contact: +91 8149301190

Email ID: umeshtupe14@gmail.com

Educational Qualifications: M. Sc., SET, Ph. D.

Teaching Experience: UG-: 06 Years, PG-: 09 Years

Experience as Administrative posts in the college

Sr. No.	Name of the post held	Period
1	Vice Principal	1.5 Year
2	IQAC coordinator	01 Year
3	Academic Research Coordinator	01 Year

4	Science faculty Incharge	01 Year
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Research Publications UGC Care list / Scopus Index/International Peer Reviewed & Refereed Journals: 35

Sr. No.	Title of Paper	Name of Journal	Impact Factor	ISSN No.	Vol /No.
1.	Synthesis techniques and applications of rare earth metal oxides semiconductors: A review	Chemical Physics Letters (Elsevier)	2.328	92614	15 March 2022 796 (2022) 139555 https://doi.org/10.1016/j.cplett.2022.139555
2.	Synthesis And Characterization Of Zinc Oxide Nanoparticles Using Green Synthesis Method	International Journal of Creative Research Thoughts (IJCRT)	7.97	2320-2882	Volume 10, Issue 2 February 2022, Page-302-309.
3.	Review on: Synthesis of Perovskite using Sol-Gel approach	International Journal of Creative Research Thoughts (IJCRT)	7.97	2320-2882	Volume 10, Issue 2 February 2022, Page-289-301
4.	Review on: IoT based Air pollution monitoring techniques	International Journal of Creative Research Thoughts (IJCRT)	7.97	2320-2882	Volume 10, Issue 2 February 2022, Page-242-247.
5.	Synthesis and Characterizations of CuO-ZnO Nano Composite Binary Oxide Thick Films As H ₂ S Gas Sensor	International Journal of Creative Research Thoughts (IJCRT)	7.97	2320-2882	Volume 10, Issue 2 February 2022, Page- 159-173.
6.	Study of Electrical, Structural and Gas Sensing Properties of ZnO Nanoparticles Synthesized By Green Synthesis Method	International Journal of Scientific Development and Research – (IJS DR)	5.47	2455-2631	Volume 7 Issue 3 March 2022, Page-15-24.
7.	Reduced Graphene Oxide Screen Printed Thick Film as NO ₂ Gas Sensor at Low Temperature	Advanced Materials Research (UGC APPROVED)	-	1662-8985	Vol. 1167, pp 43-55 doi:10.4028/www.scientific.net/AMR.1167.43
8.	Automation of Home and Office Using IOT and Google Assistant	International Journal of Scientific Research in Science and Technology	7.214	2395-6011	Volume 9 Issue 5 September 13, 2021 Page- 903-910
9.	PCB Design Plotter Using CNC Shield And Arduino	International Journal of Research Publication and Reviews	5.536	2582-7421	Vol (2) Issue (8) (2021) Page 1-6

10.	A Review on: Renewable Energy Sources and Generation of Photovoltaic Solar Technology	International Journal of Scientific Development and Research – (IJSDR)	5.47	2455-2631	Volume 6, Issue 4 © April 2021, Page 613-622
11.	Fabrication of thin film sensors by spin coating using sol-gel LaCrO ₃ perovskite material modified with transition metals for sensing environmental pollutants, greenhouse gases and relative humidity	Environmental Challenges (Elsevier)	-	2667-0100	https://doi.org/10.1016/j.envc.2021.100043 Volume 3, April 2021, 100043
12.	Stannous Oxide Thick Film Nano sensors Design by Screen Printing Technology: Structural, Electrical Parameters and H ₂ S Gas Detection Study	Material Science Research India (An International Peer Reviewed Journals)	-	0973-3469	Vol.18, No.(1) 2021, Pg. 66-74 http://dx.doi.org/10.13005/msri/180108
13.	Study of Biometrics Recognition System with Its Advantages and Disadvantages	International Education and Research Journal (IERJ)	6.808	2454-9916	Volume : 7 Issue : 1 Jan 2021
14.	MgO Incorporated ZnO Nanostructured Binary Oxide Thin Film Ethanol Gas Sensor	International Journal of Scientific Development and Research – (IJSDR)	5.47	2455-2631	January 2021 IJSDR Volume 6, Issue 1
15.	Conversion Of Unbalance Chemical Reaction Into Balance Chemical Reaction By Using Gauss Jordan Elimination Method	International Educational Applied Scientific Research Journal	6.530	2456-5040	Volume : 6 Issue : 1 Jan 2021 pp-16-21
16.	Security Controls for Database Technique & Counter Measures	International Journal of Scientific Research in Engineering and Management (IJSREM)	4.106	2582-3930	Volume: 05 Issue: 01 Jan - 2021
17.	A Literature Review on Android -A Mobile Operating system	International Research Journal of Engineering and Technology (IRJET)	7.529	2395-0056	Volume: 08 Issue: 01 Jan 2021
18.	A Literature Review On: Wireless Technologies From 0G to 7G	Iconic Research and Engineering Journals (IRE) - International Peer Reviewed Journal	3.569	2456-8880	Volume 4 Issue 6 December 2020

19.	Potentiometric Taste Sensing Using Reduced Graphene Oxide Screen Printed Electrodes	SENSOR LETTERS		1546-1971	Volume 18, Number 12, December 2020, pp. 881-888(8) https://doi.org/10.1166/sl.2020.4302
20.	The Binary Oxide NiO-CuO Nanocomposite Based Thick Film Sensor for the Acute Detection of Hydrogen Sulphide Gas Vapours	Material Science Research India (An International Peer Reviewed Journals)	-	0973-3469	Volume 17 Number 3 December 2020 DOI: 10.13005/msri/170308
21.	Recent Trends in Platforms of Embedded Systems	International Journal of Creative Research Thoughts (IJCRT)	7.97	2320-2882	Volume 8, Issue 11 November 2020
22.	Electrical, Structural and Gas Sensing Properties of CuO loaded ZnO Nanocomposites Thin Films Prepared by Thermal Evaporation Technique	International Journal of Creative Research Thoughts (International Peer Reviewed & Refereed Journals)	7.97	2320-2882	Volume 8, Issue 11 November 2020
23.	Sol-Gel Fabricated Transition Metal Cr ³⁺ , Co ²⁺ Doped Lanthanum Ferric Oxide (LFO-LaFeO ₃) Thin Film Sensors for the Detection of Toxic, Flammable Gases: A Comparative Study	Material Science Research India (An International Peer Reviewed Journals)	-	0973-3469,	Vol.17, No.(1) 2020, Pg. 70-82
24.	Quality Of Service In Cloud - A Scientometric Review	International Journal of Research and Analytical Reviews (IJRAR) (UGC APPROVED)	5.75	2348-1269	2019 IJRAR February 2019, Volume 6, Issue 1 [343-350]
25.	A Literature Review on: Synthesis Approaches of Metal doped Titanium Dioxide	Journal of Emerging Technologies and Innovative Research (UGC APPROVED)	5.87	2349-5162	Volume 6 Issue 2 , February-2019 [1238-1250]

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26.	Influence of Annealing on Structural, Electrical and Gas Sensing Properties of Thermal Evaporated Nanocrystalline ZnO Thin Films	Journal of Emerging Technologies and Innovative Research (UGC APPROVED)	5.87	2349-5162	January 2019, Volume 6, Issue 1 [1872- 1878]
27.	Review on: Synthesis Approaches and Applications of Lanthanum Oxide Nanoparticles	Journal of Emerging Technologies and Innovative Research (UGC APPROVED)	5.87	2349-5162	January 2019, Volume 6, Issue 1 [910-918]
28.	Review on: Perovskite recent progress and synthesis, characteristic, Applications.	International Journal of Research and Analytical Reviews (IJRAR) (UGC APPROVED)	5.75	2348-1269	January 2019, Volume 6, Issue 1 [223-231]
29.	A Review on Graphene & its Derivatives for Gas Sensors	Journal of Emerging Technologies and Innovative Research (UGC APPROVED)	5.87	2349-5162	November 2018, Volume 5, Issue 11 [764- 774].
30.	Sensing Behavior of Screen Printed Nanocrystalline Copper Oxide Thick Films in Presence of H ₂ S Atmosphere	Researchers word, Journal of Arts, Science & Commerce	3.19	2231-4172	Vol.–IX, Special Issue, January 2018 [53-57].
31.	Nanosized Semiconducting Stannous Oxide Thick Films Sensors for Some Oxidizing and Reducing Gases	Researchers word, Journal of Arts, Science & Commerce	3.19	2231-4172	Vol.–IX, Special Issue, January 2018 [127-131].
32.	RF controlled Arduino based mine detector and Position Spying Robot	AJANTA	5.5	ISSN 2277-5730	VOLUME-VIII, ISSUE-1- JANUARY- 2018
33.	Impact of the Evolution of Smartphones in Education Technology and its Application in Learning Electronics Circuits	AJANTA	5.5	ISSN 2277-5730	VOLUME-VIII, ISSUE-1- JANUARY- 2018
34.	Virtual Laboratory- An Innovation Teaching and Learning Method	AJANTA	5.5	ISSN 2277-5730	VOLUME-VIII, ISSUE-1- JANUARY- 2018

35.	Synthesis, Characterization and Gas Sensitivity Performance of LACRO ₃ Thick Films in presence of Ethanol Atmosphere	Researchers word, Journal of Arts, Science & Commerce	3.19	2231-4172	Vol.-VII, Special Issue-4(4), Dec.2016 [26]
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Book/ Chapter Published: Book- 01, Chapter- 01.

Title of Book	Publication	ISBN No.	Year of Publication
Book Title: E-waste: Management and Procurement of Environment Chapter Title: Impact of E-waste on Environment: Today and Future	AUTHORSPRESS, New Delhi.	978-93-90588-87-9	2021
Physics For CSIR-NET/SET(Theory & MCQ)	Vaishali Prakashan, Pune.	978-81-934781-8-9	First Indian Edition – Jan-2019

Workshop / Conferences Attended/ Participated:

Sr. No.	Date	Workshop/ Conferences	Place	Paper Presented / Participated
1	28 th & 29 th Dec. 2012	State Conference on “Recent Trends In Nano Technology”	L. V. H. College, Nashik-03.	Participated
2	19 th & 20 th Sept. 2014	National Conference on “Advance In Electronics & ITS Interdisciplinary Applications”	Fergusson College, Pune.	Synthesis and Characterization of Fe ₂ O ₃ nanoparticles screen printed thick films.
3	23 th & 24 th Dec. 2014.	National Conference on “Emerging Trends In Nanoscience & Nanotechnology ”	ASC college, Ozar (MIG)	Synthesis and Characterization of Fe ₂ O ₃ .
4	12 th and 13 th Jan. 2015	National Conference on “Recent Trends In Advanced Communication”	L. V. H. College, Nashik-03.	Controlled Climate Conditions of Greenhouse Using GSM.
5	28 th Jan 2015	Workshop on T. Y. B. Sc Physics Syllabus Revision	L. V. H. College, Nashik-03.	Participated

6	17 th & 18 th Feb 2016	International Conference on “Emerging Trends and Issues in Research & Development”	MSG ASC College, Malegaon.	Synthesis and Characterization of SnO ₂ nano particles for H ₂ S Gas Sensors.
7	18 th to 20 th Jan. 2018	International Conference on “Innovations in Nanomaterials and Their Applications”	L. V. H. College, Nashik-03.	Sensing Behaviour of Screen Printed Nanocrystalline Copper Oxide Thick Films in Presence of H ₂ S Atmosphere

Extra-Curricular Achievements:

Worked as **Guest lecturer/ Resource Person** at different UG, PG and Engineering colleges for special guidance to students.

Sr. No.	Date	Topic Name	Class	Place
1	12/09/2012	“ Embedded System ”	S. Y. B. Sc And T. Y. B. Sc (Electronics and Physics Dept.)	N.Y.N.C ASC College, Chalisgaon, Dist. - Jalgaon.
2	25/10/2013	“Robotics and Automation”	S. Y. B. Sc and T. Y. B. Sc (Electronics and Physics Dept.)	N.Y.N.C ASC College, Chalisgaon, Dist. - Jalgaon.
3	04/10/2014	“ Embedded System ”	T. Y. B. Sc and M. Sc (Computer Science Dept.)	N.Y.N.C ASC College, Chalisgaon, Dist. - Jalgaon.
4	10/02/2015	“Microcontroller and its Application”	S. Y. B. Sc (Computer Science Dept.)	H.A.L. College of Science and Commerce, Ozar Township, Tal- Niphad, Dist- Nashik.
5	06/08/2016	“ Industrial applications of Microprocessor and Microcontroller”	T. Y. B. Sc (Electronics and Physics Dept.)	N.Y.N.C ASC College,, Chalisgaon, Dist. - Jalgaon.
6	01/03/2017	“ Embedded System Development in Application Point of View”	Final Year Students of B.E. (E&TC) (Project Guidance)	Department of Electronics and Telecommunication R. H. Sampat College of Engineering, Nashik.
7	02/09/2020	“Assembly language Programming of 8051 Microcontroller”	S. Y. B. Sc (Computer Science Dept.)	K.K. Wagh ASC and Computer Science College, Nashik.

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8	25/11/2020	Webinar- “Role of ICT in the Teaching and Learning Process”	Staff and Students	ACS college, Shirsondi, Tal- Malegaon, Dist.- Nashik
9	04/02/2021	TWO DAYS STATE LEVEL SEMINAR ON- “Recent Trends in Information Technology”	Staff and Students	Department of Computer Science Pune Vidyarthi Griha's, Shriram Sadashiv Dhamankar College of Commerce, Science & Arts Nashik -04.
10	16/02/2022	Study Techniques for NET/SET Examination in Electronics	Staff and Students	Department of Electronic Science, Tuljaram Chaturchad College, Baramati- 413102.

Reviewer:

Sr. No.	Name of Journal	Impact Factor	ISSN No.
1	International Journal of Engineering Research in Africa [https://www.scientific.net/]	2.54	1663-4144
2	Material Science Research India (MSRI) -An International Peer Reviewed Journals	-	0973-3469
3	International Journal of Creative Research Thoughts (IJCRT) -International Peer Reviewed & Refereed Journals	7.97	2320-2882
4	International Journal of Research And Analytical Reviews (IJRAR) -International Peer Reviewed, Open Access Journal	-	2348-1269
5	Iconic Research and Engineering Journals (IRE) - International Peer Reviewed Journal	3.569	2456-8880
6	International Journal of Scientific Development and Research - IJSDR (An International Open Access Journal)	5.47	2455-2631

Board member of International Journals:

Sr. No.	Name of Journal	Impact Factor	ISSN No.
1	International Research Journal Of Modernization In Engineering Technology And Science (IRJMETS).	5.354	2582-5208
2	Institute For Engineering Research and Publication (IFERP) [Membership ID- PM07329618]	-	-

Research Work Experience:

Worked as a **Research Fellow** under Major Research Project entitled “**Semiconducting metal oxide based nano sensors for humidity and selective gas pollutant detection by using screen printed thick films**” in the subject of material science from 01/02/2013 to 31/06/2015. File No. 41-973/2012.



Personal Profile

Name of the Teacher: **Mr. Pawar Sachin Shivaji**

Address: A/P Shirsondi Tal: Malegaon Dist: Nashik 423208

Institute: VADP's Arts, Science & Commerce College, Shirsondi.

Date of Appointment: 01/10/2023

Department: Electronic Science

Designation: Lecturer

Date of birth: 14/04/2000

Contact: +91 9730596919

Email ID: pawarsachin6919@gmail.com

Educational Qualifications: M. Sc. (Electronic Science)

Teaching Experience: UG-: 03 Months PG-: 00 Years