



Shri Vile Parle Kelavani Mandal's
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING

(Autonomous College Affiliated to the University of Mumbai)
NAAC Accredited with "A" Grade (CGPA : 3.18)



Department of Science and Humanities

Departmental Achievements Report

A.Y. 2025-26

A.Y. 2024-25

A.Y. 2023-24



Department of Science and Humanities

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Department of Science and Humanities

Books Published



Department of Science and Humanities

Books Published

Sr. No.	Name of the faculty	Year	Category/Title	ISBN No.	Publication
1.	Dr Meenakshi Rananaware, Dr Yogesh S Parab	2025	Environmental Chemistry and Non-Conventional Energy Sources	ISBN : 978-93-7105-481-2	Himalaya Publishing House
2.	Dr. Smita Rane	2025	Professional Communication and Ethics	ISBN: 978-93-7105-793-6	Himalaya Publishing House
3.	Shirley Mathew	2025	Effective Communication Skills	ISBN 978-93-6109-148-3	Nirali Prakashan
1.	Shirley Mathew	2024	Professional Communication and Ethics	ISBN 978-93-6109-776-8	Nirali Prakashan
2.	Shirley Mathew	2022	Book chapter/“Image Building” in Communication Skills for Engineers.	ISBN 978-93-94766-21-1	SCIENG Publications.
3.	Shirley Mathew	2020	Book/Professional Communication and Ethics-1	ISBN 978-93-89825-58-9	Nirali Prakashan
4.	Shirley Mathew	2019	Book/Communication Skills (3rd revised edition)	ISBN 978-93-332-1497-2	Technical Publications
5.	Shirley Mathew	2018	Book/Communication Skills (2nd revised edition)	ISBN 978-93-332-1487-2	Technical Publications
6.	Shirley Mathew	2017	Book/Communication Skills (1st edition)	ISBN 978-93-332-1487-2	Technical Publications
7.	Shirley Mathew	2016	Book/Communication Skills (4th revised edition)	ISBN 978-93-5038-884-6	Technical Publications
8.	Shirley Mathew	2015	Book/Communication Skills (3rd revised edition)	ISBN 978-93-5038-884-6	Technical Publications
9.	Shirley Mathew	2014	Book/Communication Skills (2nd revised edition)	ISBN 978-93-5038-884-6	Technical Publications
10.	Shirley Mathew	2013	Book/Communication Skills (1st edition)	ISBN 978-93-5038-884-6	Technical Publications



Research and Publications

Academic Year

2025-2026



Department of Science and Humanities

1. Exploring various nanomaterials in enhancing the performance of chiral nematic liquid crystal for blue phase display. **Jessy P. J**, Journal of Molecular Liquids, 0167-7322
2. Highly Sensitive and Selective Room-Temperature H₂S Detection Using N-Doped Carbon Nanofiber/Ni-ZnO Composites. Akshara Paras Parekh, Carlos Posada, **Narayan Karmakar**, Shilpa Jain, Guoliang Liu, ACS Applied Electronic Materials, 2637-6113.
3. Selective Hopping and Stable Path Integration to Boost AODV's Message Delivery. Pratik Kanani, Neel Kothari, Lakshmi Kurup, Deepali Patil, Darshana Sankhe, **Gayatri Pandya**. International Research Journal of Multidisciplinary. Technovation. EISSN: 2582-1040.
4. Smart Bins, Smarter Cities: IoT- Driven Waste Collection with Real-Time Sensing and Methane Mapping. Hrushik Mehta, Vraj Deriya, Darshana Sankhe, Pratik Kanani, **Gayatri Pandya**, Vishaka Shelke. Mathematical Modelling of Engineering Problems. ISSN: 2369-0739.



Department of Science and Humanities

Research and Publications

Academic Year

2024-2025



Department of Science and Humanities

1. Diffusion limited aggregation of polymers with anisotropic interactions and phase transition. **Kartha, M.J.**, Applied Physics A, 131(6), p.507
2. Experimental and simulation study of polymer nanocomposite thin films. **Karmakar, N.S.**, Valavade, A.V., Jain, S., **Kartha, M.**, Khandekar, P.L., Shah, A., Phirke, A. and Kothari, D.C., 2025. Materials Science and Technology, p.02670836251340454
3. Synthesis and biological evaluation of novel imidazolone-thiabendazole-based metal complexes. PN, P., **YS, P.** and NS, P., 2024. International journal, 15(3), pp.1268-1274.
4. Inversion Formula of Generalized Sumudu-Laplace Transform in the Distributional Sense. Rangari, A.N., **Pawar, R.S.** and Sharma, V.D., Available at SSRN 5172505.
5. Analytical Study of Generalized Sumudu-Laplace Transform in Distributional Sense A. N. Rangari1 , **Rohini S. Pawar2** and V. D. Sharma3 Aayushi International Interdisciplinary Research Journal Sept. 2024 (ISSN 2349-638x).
6. Testing Function Spaces and Operation Transform Formulae for Sumudu-Laplace Transform A. N. Rangari1 , **Rohini S. Pawar2** and V. D. Sharma3 International Journal of Innovative Research In Technology (IJIRT 179341) May 2025 ISSN: 2349-6002.
7. A Study of Sumudu-Laplace Transform and Its Analytical Structure A. N. Rangari1 , **Rohini S. Pawar2** and V. D. Sharma3 Goya Journal May 2025 ISSN N0 : 0017 – 2715.
8. Consistency Analysis of Systems of Nonlinear Equations **Dr. Gayatri Pandya** UGC-CARE Approved Group 'II' journal Tanz Research Journal August 2024 ISSN NO: 1869-7720.
9. Biometric Data Breaches: Legal Consequences and Remedies for Victims. Darshana Nimesh Sankhe, Sandeep Musale, Snehal Bhosale, **Gayatri Pandya** Biometric Technology Today May 2024 ISSN(Online):1873-1880
10. Legal Challenges of Biometric Systems in Public Spaces: Surveillance vs. Privacy. Snehal Bhosale, Darshana Nimesh Sankhe, Sandeep Musale, **Gayatri Pandya** Biometric Technology Today May 2024 ,ISSN(Online):1873-1880
11. Synthesis and biological evaluation of novel imidazolone-thiabendazole-based metal complexes. PN, P., **YS, P.** and NS, P., 2024. International journal, 15(3), pp.1268-1274.



Department of Science and Humanities

12. Published a Book Chapter: "Professional Ethics and Business" in The Management Revolution: Navigating the Future of Business" **Dr. Anjali Samuel** Indowise International Publishers.2024-25. Print ISBN: 978-81-987622-6-9.



Research and Publications

Academic Year

2023-2024



Department of Science and Humanities

1. Enhanced Sensing Performance of an Ammonia Gas Sensor Based on Ag-Decorated ZnO Nanorods/Polyaniline Nanocomposite. **Dr. Narayan Karmakar**, Dr. Shilpa Jain, Dr. Rohan Fernandes, Dr. Akshara Shah, Dr. Uday Patil, Prof. Navinchandra Shimpi, Prof. Dushyant Kothari, ChemistrySelect. Volume8, Issue 18 May 11, 2023 e202204284. 2365-6549
2. Gow-tamburini type generation of the special linear group for some special rings **Naresh Vasant Afre** and Anuradha S. Garge. International journal of group theory. Issn (print): 2251-7650, issn (on-line): 2251-7669
3. Optimization of Health-as-a-Service Using OptiFog Algorithm. Pratik Kanani, Anil Vasoya, Kamal Shah, Neel Kothari, Nilesh Patil, **Gayatri Pandya**, Mamta Padole. International Journal of Intelligent Engineering and Systems.
4. Assessing AODV Protocol Suitability for Collision Avoidance Systems. Pratik Kanani, Jatinderkumar R. Saini, Darshana Sankhe, Deepali Patil, **Gayatri Pandya**, Archana Nanade, Bhoomi Shah. International Journal of Intelligent Systems and Applications in Engineering. ISSN: 2147-6799
5. Traditional Indian Food Classification Using Shallow Convolutional Neural Network. Bhoomi Shah, Pratik Kanani, Poonam Joshi, **Gayatri Pandya**, Dhanashree Kulkarni, Nilesh Patil, Lakshmi Kurup. International Journal of Intelligent Systems and Applications in Engineering. ISSN: 2147-6799.
6. MobileNet-Based Transfer Learning: A Novel Approach for Improved Alzheimer's Disease Classification from Brain Imaging. Dhrumil Panchal, Neel Kothari, Dhruv Gada, Pratik Kanani, Lakshmi Kurup, Darshana Sankhe, **Gayatri Pandya**. International Journal of Intelligent Systems and Applications in Engineering. ISSN: 2147-6799.
7. Reviving Memories of the Naga freedom struggle- A study of Bitter Wormwood by Easterine Kire. **Shirley Mathew**. International Journal of English and Studies. ISSN: 2581-8333.



Department of Science and Humanities

Book

Chapter



Department of Science and Humanities

Book Chapter Published

Sr. No.	Name of the faculty	Year	Category/Title	ISBN No.	Publication
1.	Dr. Anjali Samuel	2025	Published a Book Chapter: "Corporate Social Responsibility" in "Research Synergy: A Multidimensional Approach to Academia and Innovation"	ISBN:978-81-9444404-4-4.	Indowise International Publishers
2.	Dr. Anjali Samuel	2025	Published a Book Chapter: "Digital Identity and Post Humanism in Jeanette Winterson's Frankissstien" (Contemporary British Literature) in the book titled 'British Literature: Chaucer to Modern Times'	Print ISBN: 978-93-6665-0630.	Authors Click Publishing
3.	Shirley Mathew	2024	Book chapter/“Women, Land and Resistance: Ecofeminism in Linda Hogan’s Select Novels” in Unveiling Nature’s Narrative: Through the Lens of Eco-Feminism.	ISBN 978-93-92504-55-6	Research Culture Society and Publication
4.	Manisha Keshab	2024	Ancient Indian Cryptography: A unique way of encrypting the numbers	ISBN: 978-81-19098-2	Akhand Publication House
5.	Dr Yogesh S Parab	2023	Editor for the edited book/ titled Futuristic Trends in Chemical Material Sciences & Nano Technology Volume 3 Book 25	ISBN: 978-93-6252-370-9	Iterative International Publishers.
6.	Shirley Mathew	2022	Book chapter/“Image Building” in Communication Skills for Engineers.	ISBN 978-93-94766-21-1	SCIENG Publications.



Department of Science and Humanities

NPTEL/ NITTTR/

FDP/Coursera

Academic Year

2025-2026



Department of Science and Humanities

1. NPTEL- Developing Soft Skills and Personality. **Prahelika Pai**. Completed Elite Gold Certificate, top 5% ranking
2. Coursera- Foundations of Teaching for Learning: Curriculum. **Prahelika Pai**.
3. Coursera-University Teaching. **Prahelika Pai**.
4. Coursera-Understanding Research Methods. **Prahelika Pai**.
5. Coursera- People and Soft Skills for Professional and Personal Success. **Prahelika Pai**.
6. NPTEL- Mastering Speaking and Presenatations: A Case Based Approach. **Dr. Khushbu Trehan**. Completed, Elite Gold Certificate, Top 1% Ranking.
7. NPTEL/Making Learning Engaging through Interactive Games. **Dr Aditi Kulshrestha**.
8. NPTEL - Python for Data Science: **Alisha Banz**. NPTEL 1% Topper.
9. NPTEL - Essential Mathematics for Machine Learning: **Alisha Banz**. NPTEL 2% Topper
10. NPTEL - A Primer to Mathematical Optimisation. **Alisha Banz**
11. Coursesra- Crash Course on Python. Ms. **Rohini Pawar (Ghule)**
12. Coursera- Foundation of Teaching for Learning: -Curriculum. **Mr. Vishal Tendulkar**
13. Coursera-Foundation of Teaching for Learning: - Student's Assessment. **Mr. Vishal Tendulkar**
14. Coursera- Understand Research Methods. **Mr. Vishal Tendulkar**.
15. Coursera-People and soft skills for professional & personal success. **Mr. Vishal Tendulkar**
16. National Initiative for Technical Teacher's Training (All 8 Modules) **Mr. Vishal Tendulkar**.
17. ATAL FDP on Ethical and Responsible AI: Harnessing XAI for India's Economic Future. **Dr. Jessy P. J.**
18. Short Term Course in MOOC & e-content Development. **Dr. Jessy P. J**
19. NPTEL FDP - Nanotechnology, Science and Applications. **Dr. Jessy P. J**



Department of Science and Humanities

NPTEL/NITTTR/ FDP/Coursera

Academic Year

2024-2025



Department of Science and Humanities

1. NPTEL- Public Speaking. **Dr. Khushbu Trehan**. Elite Certificate
2. NPTEL "Basics of Health Promotion and Education Intervention". **Dr. Anjali Samuel**
3. 21 days Faculty Induction Program (FIP)MMTC. **Dr. Anjali Samuel**
4. NPTEL- FDP on "Modernization and Creative Communication". **Dr. Anjali Samuel**.
5. NPTEL/ Introductory Organic Chemistry II. **Dr Yogesh S Parab**
6. SWAYAM NPTEL: Graph Theory. **Dr. Naresh Vasant Afre**.
7. SWAYAM NPTEL: Research Methodology. **Ms. Rohini Pawar (Ghule)**
8. Faculty Induction Programme – VI (Guru Dakshata). **Dr. Smita Amogh Bhatavadekar**
9. SWAYAM NPTEL: Graph Theory. **Dr. Smita Amogh Bhatavadekar**
10. Applications of AI-ML-DL in Product Life Cycle Design and Management. **Dr. Smita Amogh Bhatavadekar**
11. NPTEL- Essential Mathematics for Machine Learning. **Alisha Banz**
12. NPTEL- Python for Data Science. **Alisha Banz**
13. NPTEL- Essential Mathematics for Machine Learning. **Micheal Ammal Nadar**
14. NPTEL- Research Methodology. **Micheal Ammal Nadar**
15. FIP - **Dr. Jessy P. J**
16. NPTEL FDP- Physics of Functional Materials & Devices. **Dr. Jessy P. J**
17. ATAL FDP on Quantum Computing. **Dr. Jessy P. J**
18. webinar on Quantum Computing for the Next Generation. **Dr. Jessy P. J**
19. NEP 2020 Orientation & Sensitization Programme. **Dr. Jessy P. J**
20. Descriptive Statistics with R Software. **Dr. Moses Kartha**
21. One week online FDP on Evolution of Generative AI Past, Present and Future. **Dr. Moses Kartha**
22. 14 Days FDP on "Innovative Teaching Strategies and Tools in the Digital Age. **Dr. Moses Kartha**



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NPTEL/ NITTTR/

FDP / Coursera

Academic Year

2023-2024



Department of Science and Humanities

1. NPTEL course on Educational Leadership. **Shirley Mathew**. Completed with score 97%
2. SWAYAM NPTEL: Introduction to Probability Theory and Statistics. Ms. **Rohini Pawar (Ghule)**
3. SWAYAM NPTEL: Mathematical Methods and its Applications. **Manisha Keshab**
4. AICTE 5 day online FDP on "Inculcating Universal Human Values in Technical Education. **Dr. Jessy P. J**
5. NPTEL FDP 8 weeks course on Roadmap for patent creation. **Dr. Jessy P. J**
6. NPTEL FDP 12 weeks course on Maternal Infant Young Child Nutrition. **Dr. Jessy P. J**
7. NPTEL FDP 12 weeks course on Introduction to Laser. **Dr. Jessy P. J**
8. NPTEL FDP 12 weeks course on Introduction to Laser. **Dr. Narayan S. Karmakar.**