

Institute of Science, Nagpur
Department of Physics
M.Sc. sem IV project details

2023-2024

Sr. No.	Guide name	Student Name	Project Title	Project Type	Sr. No.
1	Dr. M. Y. Salunke	Sanskriti Admane Rushikesh Dhane Motilal Masram	Synthesis, Characterization and Investigation of Optical properties of Li_2SiO_3 based Phosphors Synthesis and characterization of MgO by combustion synthesis Investigation on ZnO based electrolyte materials for Solid Oxide Fuel Cell	Experimental Experimental Experimental	1 2 3
2	Dr. K. M. Alii	Mantlan Gajbhile Sushmita Bhande Vaishnavi Thakare Arslan Pathan	Fabrication of sensor for measuring spice level of raw chilli Imaging through media having different turbidity To study Supercapacitor doped INFLUENCE OF COUNTERIONS ON STRUCTURAL DYNAMICS OF DNA	Experimental Experimental Experimental Experimental	4 5 6 7
3	SUNIL R. PATIL	Nivedita Dongre Goldi Rathod Roshni Thakre	COMPUTATIONAL STUDY OF ELECTRONIC STRUCTURE OF CuSe INFLUENCE OF COUNTERIONS UNDER HIGH AND LOW TEMPERATURES ON STRUCTURAL DYNAMICS OF DNA Computational Study of Magnetization And Thermal Properties Of CuSe	Computational Computational Computational	8 9 10
4	Dr. C. M. Dudhe	Gurleen Kaur Khokhar Kumkum Barewar Bhavana Khambalkar	Synthesis of CaO 5SSrO $5\text{Nb}_2\text{O}_6$ by co-precipitation method Synthesis of CaO 9YCeO $0.1\text{Nb}_2\text{O}_6$ using Co-Precipitation method Synthesis of CaO 5SSrO $5\text{Nb}_2\text{O}_6$ by co-precipitation method	Computational Experimental Experimental	11 12 13
5	Dr. C. P. Chaudhari	Mrunalini Nrupnarayan Awani Galgale Vaishnavi Prabhakar Tekade	Review of Indian Lunar Missions Synthesis and Structural Analysis of CaO 5SSrO 4TiO_2 $0.5\text{Nb}_2\text{O}_6$ Synthesis and CHARACTERIZATION of novel alkaline earth niobate CaO 98TiO_2 $0.2\text{Nb}_2\text{O}_6$	Experimental Review Experimental	14 15 16
6	Sarveshwar Kasarla	Dipali D. Sakhare Rahul B. Raut Umait V. Mohod	USING CO-PRECIPIATION METHOD DOPING TO IMPURITY FORMATION OF NIOBATE Study of Dust Properties In Elliptical Galaxy NGC5018 Spectral Energy Distribution Study of Star Forming Blue Early Type Galaxies	Experimental Experimental Computational	17 18 19
7	Swati Deshmukh Chavan	Bhuvaneshwari P. Hukare Surabhi Thote Adiba Pathan	A Review On Gravitational Wave Detectors Synthesis and characterization of ZnO $(7-x)\text{Ni}(x)\text{Mg}(0.3)\text{Fe}_2\text{O}_4$ spinel ferrite Structural and electrical studies of $\text{Gd}(\text{ZrCo})_0.5\text{Ni}(\text{O})_2\text{MnO}_6$ prepared by sol gel method	Computational Review Experimental	20 21 22
8	Dr. R. M. Belkar	Firdosh Khan Samir Gadhave Swapnil Nakhale	Synthesis and characterization of ZnO $(7-x)\text{Ni}(x)\text{Mg}(0.2)\text{Cu}(0.1)\text{Fe}_2\text{O}_4$ prepared by solution combustion method An investigation on ZnO based electrolyte materials for SOFC An investigation on LaMnO_3 electrode material for SOFC	Experimental Experimental Experimental	23 24 25
9	Dr. Kalpna H Adhau	Pushpam Gajbhile Sonali Parastam Kewat Payal Chaudhari	An investigation on SrTiO_3 electrode material for SOFC Study of Synthesis and Luminescence Properties of $\text{RE}_3+\text{IEU}_3+$, Ce_3+ , Dy_3+ and Tb_3+ 1-Doped $\text{Li}_2\text{SiSiO}_4$ Phosphors Synthesis and luminescence optical properties of rare earth elements doped in $\text{KL}_3\text{SiSiO}_4$	Experimental Experimental Experimental	26 27 28
10	Yogesh Wankhede	Prasad Rathod	Study of PVA polymer electrolyte for supercapacitor	Experimental	29

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DEPARTMENT OF PHYSICS
Institute of Science, Nagpur

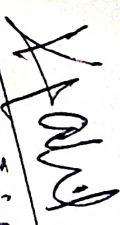
Institute of Science, Nagpur
Department of Chemistry
M.Sc. Sem IV Project Details
2023-2024

Sr. No.	Guide name	Student Name	Project Title	Project Type	Sr.No.
1	Dr. Anjali Rahagoankar	Ms. Vinita R. Tijare Ms. Anisha S. Labale	COMPUTER AIDED DOCKING STUDY OF QUINOLINE DERIVATIVES AS SARS COVID 19 PROTEIN INHIBITORS COMPUTER AIDED DOCKING STUDY OF THIAZOLE DERIVATIVES AS SARS COV - 19 PROTEIN INHIBITORS	Experimental Experimental	1 2
2	Dr. Sujata Deo	Ms. Monali Baki Mr. Sushant Rathod	Synthesis and characterization of cerium Nanoparticles via Green and Chemical methods: Investigating Catalytic and antibacterial properties Synthesis and characterization of Ag-Fe Bimetallic Nanoparticles via Green and Chemical methods: Investigating Catalytic and antibacterial properties	Experimental	3 4
2	Dr. A. B. Kalambe	Mr. Rohit Chanorkar Ms. Nutan Lanje	Synthesis and Characterization of Schiff's Base Ligand for Corrosion Inhibition of Mild Steel in Sulphuric Acid Medium Green and Chemical Synthesis of Schiff's Base Ligand and its Industrial and Biological Applications	Experimental Experimental	5 6
3	Dr. V. M. Bhuse	Mr. Harshkumar C. Dhete Ms. Manisha Manohar Randhai Ms. Shehroz Aftreen	Synthesis and Characterization of CdO Nanoparticles ZnO based Dye Sensitized Solar Cells Preparation of Cadmium Sulphide Thin Film by Chemical Bath Deposition Method and its applications	Experimental Experimental Experimental	7 8 9
4	Dr. Mohammad Idrees	Ms. Pournima Manoj Thakre Ms. Shrutika Hanumantrao Borkule Ms. Spurti R. Dekale	Synthesis of Some Novel Carbohydrazide Derivatives Clubbed with Oxadiazole and Coumarin Moiety A Simple, Precise and Convenient Colorimetric Determination of Ampicillin in Some Pharmaceutical Formulations by Coupling with Diazotized 4-Aminoacetophenone	Experimental Experimental Experimental	10 11 12
4	Dr. Naqui Jahan Siddiqui	Ms. Maitreyee S. Padeer Ms. Prachi M. Ilankar Mr. Ayush Nandeo Kusram	A Novel Colorimetric Method for the Determination of Chloramphenicol in Pharmaceutical Preparations using Salicylaldehyde as a Coupling Reagent Use of Phloroglucinol as a Novel Reagent for the Colorimetric Determination of Sulfamethoxazole in Some Pharmaceutical Dosages Colorimetric Estimation of Amoxicillin in Few Capsule Dosage Forms by Charge Transfer Complexation with Sodium Nitroprusside	Experimental Experimental Experimental	13 14 15 16
5	Dr. S. Z. Jadhav	Ms. Dipiti RAGHUTE Ms. Shruti Rahi Ms. Pranjal Shankuwar	Synthesis of Ferric oxide Nanoparticle and study by X-ray Diffraction Spectroscopy Synthesis of Silver nanoparticles and study by UV-visible and Antibacterial activity	Experimental Experimental Experimental	17 18 19
6	Prashant Ashlapurey	LOTE DIVYA DILIP UKKEY DIVYA RAJENDRA KORE POOJA DEEPAK GHODE PRAGATI RATNAKAR DUBEY RANI MANOJ AANAM ZUBIYA ASRAR	Study of The Effect of Co-Solvents on The Critical Micelle Concentration (CMC) of Sodium Lauryl Sulphate Measuring The Lactose Content in Commercial Milk Corrosion of Mild Steel In Different Concentration of Nitric Acid. PK Value of Different Fruit Juices By Potentiometric Titration A Comparative Study of Experimental and Theoretical Refractive Index of Binary Liquid Mixture Using Mathematical Methods Critical Behavior of Refractive Index of Binary Mixture Ethylene Glycol – Water	Experimental Experimental Experimental Experimental Experimental Experimental	20 21 22 23 24 25
7	Dr. Rameshwar Shinde	Ms. Pooja Dhanorkar	Highly Efficient Synthesis of Z-Enamide from Azlactone	Experimental	26
8	Dr. Balu S. Navale	Prachi Thakare	"Identification of Unknown Organic Compounds Using Various Spectroscopic Methods"	Experimental	27
9	Dr. Rajendra R Tayade	Ms. MOHINI SUDHIR RATHOD Ms. POONAM GAUTAM BHOWATE	"BIOFABRICATION OF SILVER NANOPARTICLES: HARNESSING NATURE'S BLUEPRINT" "HARNESSING THE POWER OF BIOGENESIS FOR SUSTAINABLE SYNTHESIS OF SILVER NANOPARTICLES"	Experimental Experimental & Analysis	28 29

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Institute of Science, Nagpur
Department of Zoology: M.Sc. Sem IV Project details
Academic Year 2023-24

1	Dr. Aruna K. Kawadkar	Ms. Pratiksha S. Kale	Analysis of general health parameters and routine habits among the female college students.	Experimental and Survey
		Mr. Mandar M. Wadhai	Analysis of general health parameters and routine habits among the male college students.	Experimental and Survey
		Ms. Vinanti V. Rangari	Coronary Artery Disease	Survey
		Ms. Shruti D. Wahane	Prevalence of Dental caries	Survey
		Mr. Om Avinash Parbat	Paediatric head injury	Survey
2	Dr. Kishor Sukhadeo Janbandhu	1) Ku. Tanvi M. Amesur	Case Study of Natural Problems Faced by Women to Conceive (Infertility in Women)	Case study
		2) Ku. Uzma Abid Sidhiqui	Survey of Rural and Urban Women's Which Used Contraceptives to Control Birth From Maharashtra	Survey
		3) Mr. Vaibhav P. Kore	Study of Sperms Abnormalities in Human	Experimental
		4) Chinu L. Katre	A Survey of Calcium Status in Pre and Post Menopausal Women of Gondia, Maharashtra	Survey
		5) Ku. Kalyani S. Kashyap	A Survey of Reproductive Health Regarding With Menstrual Cycle	Survey
3	Dr. J. S. Maske	1) Manish G. Chandekar	Study of zooplankton diversity of Ukkalwahi reservoir, Tahsil Umred, Dist. Nagpur	Experimental
		2) Pragati V. Hinge	Study on ichthyofauna of Kanhan river, Mouda, Dist. Nagpur	Experimental
		3) Rohini R. Jawanjari	Study on fecundity and spawning periodicity of Heteropneustes fossilis from Chuband river, Tahsil Lakhani, District Nagpur	Experimental
		4) Zahera Jamal M. A. Khan	Morphometric and meristic study of some freshwater fishes from Itwari fish market, Nagpur	Experimental
		5) Renuka S. Subhedar	Studies on physico-chemical parameters of two water bodies, Ambazari and Futala lake of Nagpur city	Experimental



विभाग प्रमुख, प्राणीशास्त्र विभाग
विज्ञान संस्था, नागपूर.

Institute of Science, Nagpur

Department of Botany,

Details about PG Projects completed in 2023-24.

Sr. No.	Guide Name	Students Name	Project Title
1.	Dr. H.R. Pohekar	Yogita S. Kowe	Documentation of wild leafy vegetables of Nagpur district maharashtra.
2.	Dr. H.R. Pohekar	Chaitanya P. Khandale	Survey of medicinal plants in south Nagpur.
3.	Dr. H.R. Pohekar	Prathamesh P. Shende	Survey of anti-inflammatory plants in Tadoba National Park (Moharli Village).
4.	Dr. H.R. Pohekar	Pragati D. Lambat	The survey of medicinal plants from Rajola village of ta. Kuhi, Dist. Nagpur.
5.	Dr. H.R. Pohekar	Manish P. Kadukar	Survey of wild edible vegetables used by common people of Saoli Taluka of Chandrapur district.
6.	Dr. N. B. Yemul	Aditi A. Rode	Mitigation of drought stress by application of salicylic acid.
7.	Dr. N. B. Yemul	Yash Karokar	"Herbicidal action of methanolic extract of <i>Vernonia cinerea</i> (L.) less. On <i>Alternanthera sessilis</i> (L.) R. Br. Ex DC & <i>Clitoria ternatae</i> L."
8.	Dr. N. B. Yemul	Nidhi Upadhyay	Studies on properties of gum yielding plants from Nagpur district of maharashtra.
9.	Shrikant Borkar	Bharati R. Fating	Nutritional evaluation of selected wetland plants used as a food by bar headed goose.
10.	Dr. Uma Thakur	Sakshi Shrikhande	Impact of microfiber pollution on plant growth.
11.	Dr. Uma Thakur	Pranjali Bhong	Studies on microfibers emission from domestic laundry and its impact on soil properties.
12.	Dr. Kirti Gopal	Jasmine D. Sakhare	Green synthesis of silver nanoparticles and its characterization.
13.	Dr. Kirti Gopal	Medhavi S. Barsagade	Mosses used as an air purifier.
14.	Dr. Kirti Gopal	Samiksha R. Madavi	Cultivation of leafy Vegetable through hydroponics technology.
15.	Sushma Borkar	Seema Jawade	Evaluation of physicochemical and antioxidant properties of repeatedly fried cooking oil used by food venders and its effects on human health.
16.	Sushma Borkar	Achal Bagade	Polyherbal formulation of hair oil evaluation of physicochemical parameters.
17.	Sushma Borkar	Aditi Jaiswal	Role of plants as a bioindicators and application as potential green build for industrial area of Nagpur city.
18.	Sushma Borkar	Juhi Chalani	Assessment of physiochemical parameters of soil and impact of arbanization and industrialization vegetation around Nagpur city.
19.	Sushma Borkar	Sakshi Badole	Standardization of TLC for the screening of phytoconstituents of the polyherbal formulation used by the indigenous practitioners for the treatment of anaemia.

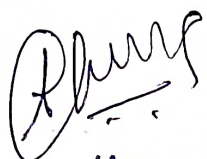

Head, Department of Botany
Institute of Science, Nagpur-440001

Institute of Science, Nagpur

Department of Statistics

Details about PG Projects completed in 2023-24.

Sr. No.	Guide Name	Students Name	Project Title
1	Dr. Priti Singh	1.Atharva Ubale 2.Renuka Khapre 3.Shravani Atkare	Analysis of Child Mortality and Maternal Health
2	Dr. Gayatri Behere	1.Dipansha Chakor 2. Trupti Zade 3.Vaishnavi Deshmukh 4.Shejal Barke	Data Analysis on REV_ANALYTIX:Unveiling Revenue Patterns in Hospitality (EDA Project)
3	Dr.Priti Singh	1.Ruchi Jibhkate 2.Ruchika Ambade 3.Vaishnavi Shende	Exploring the Influence of Demographic Factors on Food Preferences: A Cross Cultural Analysis
4	Dr.Abhay Khamborkar	1.Nandini Sakhare 2. Harshita Patmase 3.Shrirang Ganeshe	Time series Forecasting of Air Pollution in Nagpur using different statistical models and their comparison
5	Dr. Gayatri Behere	1.Nachiket Batwe 2. Afsha Sheikh 3.Neha Zoting	Credit card Fraud Detection


Head
Department of Statistics
Institute of Science, Nagpur



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SUBJECT: ENVIRONMENTAL SCIENCE
M.Sc.- Second Year: Semester-IV
Name of the Course: Practical II Laboratory Course Project Work
Course Code: MESSS48

List of students for Research Project by Institute for the Academic Year 2023-24

Sr. No	Roll No.	Guide Name	Name of Student	Title of Project	Project Type	Sr. No.
1.	2394701	Ms. Yashi Sharma	Ms. Anshika Kameshwar Mishra	Analysis of Environmental Parameters of Lonare Lake of Nagpur City	Experimental	1
	2394708		Ms. Purvi Pawan Vaishnav	Comparative Analysis of Ambient Air Quality Parameters of Rural and Urban Area of Nagpur District	Experimental	2
2.	2394702	Dr. Sheetal Kharwade	Ms. Dhanshree Shyam Bante	Role of Legumes in improving Soil Fertility and increasing crop productivity	Review	3
3.	2394703	Ms. Sukhada Nagpure	Mr. Dhiraj Chhatrapal Chavan	Prediction of Air Quality Index using Spatial Interpolation Technique in Quantum GIS	Computational	4
4.	2394704	Dr. Shubhangi Jangle	Ms. Janhavi Raju Gajghate	Impact on Vegetative Crops due to Climate Change	Review	5
5.	2394707		Ms. Priya Bhagwatrao Chorghade	Impact on Residential Area due to Open Dumping of Solid Waste in Bhandewadi	Review	6
6.	2394705	Dr. Anagha Patil	Ms. Niharika Sureshrao Tople	Assessment of Rural Heritage Landscape as Sacred Biodiversity Grove	Field study	7
7.	2394706		Ms. Nisha Raju Rohankar	Computing of Forest Ecological Facades at Keslaghat Buffer Zone-Chandrapur	Field Study	8
8.	2394709	Ms. Nain Sayed	Ms. Vaibhavi Chandrashekhhar Kshirsagar	Beyond Emissions: Navigating Policy Landscape for Carbon Capture and Storage	Review	9
9.	2394710	Ms. Shilpa Bhajani	Ms. Varada Aalok Risaldar	A Comparative Study of Biogas upgradation Technologies	Review	10