IPS ACADEMY

INSTITUTE OF ENGINEERING & SCIENCE

Indore (M.P.)

AUGC Autonomous Institute
Affiliated to

Rajiv Gandhi Proudyogiki Vishwavidyalaya Bhopal

Annual Report (R&D) 2024-25

A. About Research and Development (R & D) Cell

Vision

To be the fountainhead of novel ideas & innovations in science & technology & persist to be a foundation of pride for all Indians.

Mission

To develop and expand innovative research programs that align well with institutional mission and strategic plan, address important national and global needs, and through technology transfer and commercialization
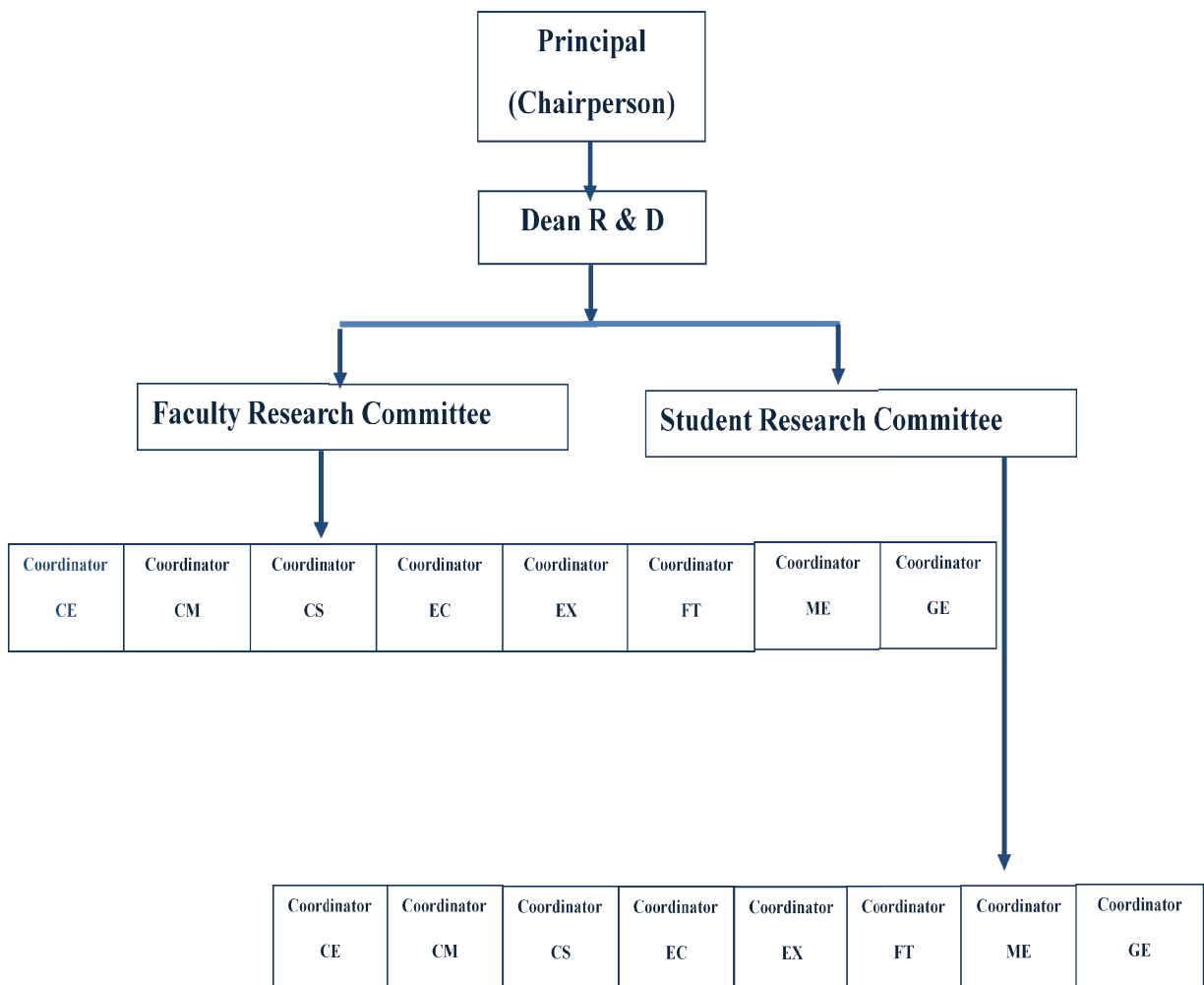
Objectives

➢ R&D Cell aims to foster research culture in the College by promoting research in newly looming and challenging frontier areas of Engineering, Technology and Science.

➢ It encourages the students and faculty to undertake the research in in multidisciplinary fields.

➢ This fortifies the general research capability of budding technocrats by way of participating in conferences, seminars, workshops, project competition, etc

➢ To encourage young Engineers to take up challenging R&D activities.

➢ To encourage patenting facilities to Engineers in the country for Indian and foreign patents on a sustained basis.

Functions of R & D

- ➢ Identification of thrust areas of research in each Department.
- ➢ Advise and encourage the faculty to carry out research in-house and in collaboration with other organizations.
- ➢ Visit various departments and meet the faculty to encourage and motivate them to undertake research projects and to scrutinize the proposals before submitting to funding agencies.
- ➢ Identification of physical and human resources to carryout research.
- ➢ Identify the budgetary requirements and resources for funding the research.
- ➢ Review the progress of research and offer necessary guidance whenever required.
- ➢ Monitor and propose the funding from college budget for promotion of research activities.
- ➢ Identify different organizations/ industries to undertake collaborative research on current topics of mutual interest.
- ➢ To develop state of art laboratories such microfluidics lab and heavy structure lab.
- ➢ To develop earthquake research center in the institute.

Proposed Structure of R & D

```
                    ┌─────────────────┐
                    │    Principal     │
                    │  (Chairperson)   │
                    └────────┬─────────┘
                             │
                    ┌────────▼─────────┐
                    │   Dean R & D     │
                    └────────┬─────────┘
                             │
              ┌──────────────┴──────────────┐
              │                             │
  ┌───────────▼──────────────┐   ┌──────────▼───────────────┐
  │ Faculty Research Committee│   │Student Research Committee │
  └───────────┬──────────────┘   └──────────┬───────────────┘
              │                             │
```

Coordinator CE	Coordinator CM	Coordinator CS	Coordinator EC	Coordinator EX	Coordinator FT	Coordinator ME	Coordinator GE

Coordinator CE	Coordinator CM	Coordinator CS	Coordinator EC	Coordinator EX	Coordinator FT	Coordinator ME	Coordinator GE

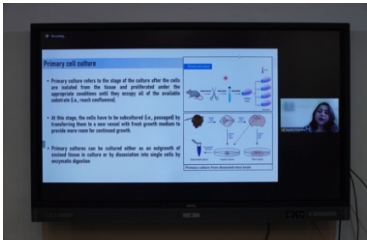**Constitution of Research Advisory Committee**

Constitution of Research and Development Cell (RDC)

The constitution of Research & Development Cell (RDC) is as follows:

1. Dr. Archana Keerti Chowdhary, (Principal) Chairperson

2. Dr. Amit Sharma, Professor, Dean, Research Development Cell

3. Dr. Abhinesh Prajapati, Professor, Coordinator

4. Dr. J. Ponomozhi, Professor, Mechanical Engineering, Member

5. Dr. Dharmendra Singh Yadav, Professor, Electronics & Communication
   Engineering, Member

6. Dr. Sumit Bhatiya, Professor, Fire Technology and Safety Engineering, Member

7. Dr. Devanshi Jagwani, Professor, Civil Engineering, Member

8. Dr. Vaishali Gupta, Associate Professor, Computer Science and Engineering, Member

9. Dr. Kanti Kumar Athankar, Associate Professor, Chemical Engineering, Member

10. Dr. V. G. Sadh, Associate Professor, Humanities, Member

11. Dr. Indra Kumar Shah, Associate Professor, CSE, IoT, Member

12. Dr. Nisha Agrawal, Associate Professor, General Engineering, Member

13. Dr. Mohd Nasim, Assistant Professor, Civil Engineering, Member

14. Mr. Kapil Vyas, Assistant Professor, Computer Science & Information Technology, Member

15. Ms. Vandana Dubey, Assistant Professor, Artificial Intelligence Markup Language, Member

The responsibility of the research and development cell (RDC) is to implement & monitor the framed policies which help to the promotion of research activities for the benefit of all.

B. Research Project (Ongoing)

Sr. No.	Title of Project	Name of the collaborating agency with contact details	Name of the participant from Institute	Financial Year	Amount	Duration
1	Drug diffusion studies on skin-on-a-chip: Influence of shear stress (Internal Funding 2023)	**Collaboration with CNCI – Dr. Arpita Banerjee,** Chittaranjan National Cancer Institute	Dr. J. Ponmozhi	2023 - 2026	**Amount from IPSA-IES:**29.5 L	3 years

C. (i) Research Publication (July2024- June 2025)

S. No	Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal	Month and Year of publication	ISSN
1	Mr. Yagyapal Yadav Mr. Vijay Choudhary	CSIT	Abusive Language Detection using Deep Learning Approach	Indian Journal of Natural Sciences	June 2025	0976 – 0997
2	Dr. Prateek Nahar Dr. Vaishali Gupta	CSIT	Enhanced Biometric Identification Systems: Deep Learning-Based Fingerprint Classification with VGG16 Model	Indian Journal of Natural Sciences	June 2025	0976 – 0997
3	Dr. Nisha Agrawal Dr. Neha Yadav	Mathematics	Development of a Fuzzy Inference System forEarly Diagnosis of Heart Disorders	International Journal of Environmental Sciences	May 2025	2229-7359
4	Dr. Manish Sahajwani Dr. Pooja Bhatt	Ex	Relay Selection in Cooperative Communication using Log-Likelihood Ratio over a Two-State Markov Fading Channel	Eksplorium-Buletin Pusat Teknologi Bahan Galian Nuklir	May 2025	0854-1418

5	Dr. Dharmendra Singh Yadav	EC	Contrary Index Spectrum Allocations Scheme for Primary and Backup Routes in Survivable Mixed Grid Optical Networks	IoT Letter	May 2025	2476-1508
6	Dr. Harish Kumar Dwivediy Dr. Archana Keerti Chowdhary Dr. Abhinesh Kumar Prajapati,	CE and CM	The Hydrological Simulation of a River Basin using the SWAT-CUP Model	Indian Journals of Natural Sciences	Apr-25	0976-0997
7	Dr. Nitin Kumar Jain Mr. Sunil Nimawat Dr. Neeraj Shrivastava	EC and CS	Relay Nodes Selection Algorithm for Clustered Wireless Sensor Network using Fuzzy Logic (RNCWSNFL)	Indian Journal of Natural Sciences	Apr-25	0976 – 0997
8	Dr. Kanti Kumar Athankar	CM	Reactive Separation of Caproic acid from Aqueous Streams Using Tri-n-butyl phosphate in Natural Diluents	Multiphase Science and Technology	Apr-25	0276-1459
9	Dr. Abhinesh Kumar Prajapati and Dr. Shamal Sen	CM	COD and color removal from real textile dyeing effluent using intensification of ozonation and Fenton (O_3/Fe^{2+}/H_2O_2) processes: optimization using RSM	Discover Electrochemistry	Mar-25	3005-1215
10	Dr. Harish Kumar Dwivedi and Dr. Archana Keerti Chowdhary and Dr. Abhinesh Kumar Prajapati	CE and CM	Optimal Allocation of Water for an Irrigation Project: A Case Study	Indian Journals of Natural Sciences	February 2025	0976-0997

11	Mr. Deepak Shukla	CS	PoseRx: A Transformer-Based Remedy for Precision in Physical Rehabilitation Monitoring	Journal of Information Systems Engineering and Management	25/02/2025	2468-4376
12	Dr. Pooja Bhatt	EC	Defence Locator Beacon: Integrating SHF Body-Wearable Antenna with Multifunctional Frequency Selective Surface	Defence Science Journal	Jan-25	0011-748X
13	Dr. Vaishali Gupta	CS	Prediction of Diabetes Using Various Machine Learning Techniques	Bharatiya Vaigyanik Evam Audyogik Anusandhan Patrika	Dec-24	0771-7706
14	Dr. Amit Sharma	CE	Three-dimensional grid characteristic schemes of high order of approximation	Doklady Mathematics	Dec-24	2686-9543
15	Vandana Dubey	CSE	Analysis of Soft Computing based PID Controller Strategies for Cardiac Pacemaker	Advances in Nonlinear Variational Inequalities	Dec-24	1092-910X
16	Mr Lalitesh Sinha	CE	Optimal Operation of Multi-reservoir System Utilizing DEA, AIDE Algorithm and Flood Control Assessment by MCDM Approach	Water Resources Management	Dec-24	1573-1650
17	Ms. Ritumabara Chauhan and Ms. Harleen Kaur	CSE	A machine learning-based iris tracking system for predicting emotions from social media interactions"	Science, Technology and Development	Dec-24	0950-0707
18	Dr. Mohd Nasim Dr. Amit Sharma Dr. Harish Kumar Dwivedi Dr. Diwakar Singh Dr. Satish Raghuvanshi Dr. Abhinesh Kumar	CE, CM and ME	State of the art review for industrial wastewater treatment by electrocoagulation process: Mechanism, cost and sludge analysis	Desalination and Water Treatment	Nov-24	1944-3986

			Prajapati Dr. Deepak Sharma Dr. Shamal Sen Dr. Savita Dubey				
19	Mr. Arvind Upadhyay	CSE	Crow Search Algorithm (CSA) for Task-Scheduling in Cloud Computing	Nanotechnology Perceptions	Nov-24	1660-6795
20	Dr. Vaishali Gupta	CSE	Spatiotemporal data fusion and deep learning for remote sensing-based sustainable urban planning	International Journal of System Assurance Engineering and Management	Nov-24	0976-4348
21	Dr. Pooja Bhatt	Ex	A tensile wearable SHF antenna with efficient communication in defense beacon technology	Defense Technology	Nov-24	2214-9147
22	Dr. Abhinesh Kumar Prajapati	CM	Electrocoagulation treatment of debrominated wastewater: A critical observation and analysis	Desalination and Water Treatment	Oct-24	1944-3986
23	Mr. Arvind Upadhyay	CSE	Improve the KDD CUP 1999 Data by Comparing and Removing the Count Attribute	Indian Journal of Natural Sciences	Oct-24	0976 – 0997
24	Mrs. Pushpa Bansiwal , Dr. Neeraj Shrivastava and Dr. Sunil Nimawat	CSE	A Probabilistic Machine Learning based Sentiment Analysis Approach for Predicting Customer Reviews	Indian Journal of Natural Sciences	Oct-24	0976 – 0997
25	Dr. Vaishali Gupta	CSE	Improve the KDD CUP 1999 Data by Comparing and Removing the Count Attribute	Indian Journal of Natural Sciences	Oct-24	0976 – 0997
26	Dr. Ranjana Choudhary Ahirwar	CM	Zirconium Vanadate (ZrV2O7) Nanoparticles: Synthesis and Characterization	Journal Surface Science Technology	Sep-24	0976-9420

27	Dr Mohd Nasim	CE	Investigation of Black Cotton Soil Using Prototype Testing as a Clay Core Material for embankment dams	Journal of Physics; Conference Series 2779 (2024)012065	Aug-24	1742-6596
28	Dr Mohd Nasim	CE	Enhancing Concrete Properties Through the Strategic Incorporation of Granite and Marble Dust as Sustainable Alternatives to Natural Sand	Journal of Physics; Conference Series 2779 (2024)012065	Aug-24	1742-6596
29	Indra Kumar Shah and Dr Yogendra Singh Dohare	CSE and Ex	Optimizing cluster head selection for energy efficiency in wireless sensor networks: A hybrid algorithm combining grey wolf and enhanced sunflower optimization	Internet Technology Letters	Aug-24	2476-1508
30	Deepesh Bhati	Ex	A Improved Prognostic Weighted Clustering Method to Lower Overheads in Mobile Ad-hoc network	Library Progress International	Jul-24	2320 317X

Conference (July 2024 - June 2025)

Sr. No	Name of the Author(s)	Department of the Author (s)	Title of the Paper	Name of the Conference	Month and Year of publication	DOI/ISBN
1	Dr. Archana Keerti Chowdhary Mrs. Pallavi Gupta. Dr.Deevanshi Jagwani Mrs. Sonam Yadav	CE	Impact of ZYCOTHERM Additive on the Performance of Unmodified Bitumen and Bituminous Concrete Mixes in the Construction Industry	NESDRI 2023	May 2025	978-93-48717-26-9
2	Dr. Keerti K Chowdhary Dr.Amit Sharma	CE	Experimental Investigations of Pre-stressed Concrete Beams under Creep	NESDRI 2023	May 2025	978-93-48717-26-9
3	Dr.Harish Kumar Dwivedi Mr. Lalitesh Sinha Mr. Praveen Kumar	CE	Optimizing Time and Cost in Road Construction: A Novel Approach Using the Teaching-Learning-Based Optimization (TLBO)	NESDRI 2023	May 2025	978-93-48717-26-9
4	Mr. Arpit Sethiya Dr. Mohd. Nasim Mr. Diwakar Singh Dr.Harish Kumar Dwivedi	CE	A Sustainable Approach for Waste Reduction and Enhanced Strength for Industrial Application	NESDRI 2023	May 2025	978-93-48717-26-9

5	Dr. Amit Sharma	CE	An mechanical impedence Method For Structural Health Monitoring Using Piezoelectric Materials	NESDRI 2023	May 2025	978-93-48717-26-9
6	Dr. Ashish Nim	CE	Analyzing Risks in Construction: A Comprehensive Study	NESDRI 2023	May 2025	978-93-48717-26-9
7	Mr. Neeraj Mishra Ms. Tanushree Sinha Dr. Ashish Nim	CE	Characterization of Cement Mortar Incorporating Silica-BasedMaterials Derived from Diverse Waste Sources: A Review	NESDRI 2023	May 2025	978-93-48717-26-9
8	Mr. Arpit Sethiya Mr. Vijay Baradiya	CE	Analyzing the Impact of Delay Factors on Construction Industry Project	NESDRI 2023	May 2025	978-93-48717-26-9
9	Dr.Harish Kumar Dwivedi Mr. Diwakar Singh Dr. Mohd. Nasim	CE	High Rise Building with Electric Vehicle Charging Station Infrastructure	NESDRI 2023	May 2025	978-93-48717-26-9
10	Dr. Mohd. Nasim Mr. Vijay Baradiya Mr. Diwakar Singh	CE	Analyzing the Impact of Delay Factors on Construction Industry Project Timelines	NESDRI 2023	May 2025	978-93-48717-26-9
11	Mr.Praveen Kumar Mr.Lalitesh	CE	Driving Productivity growth: A Partial Least Square-Structural Equation Modeling	NESDRI 2023	May 2025	978-93-48717-26-9

	Sinha Mr.Lalitesh Sinha					
12	Dr. Amit Sharma	CE	Methods of Assessment of Flood Impact and Floodplain Mapping on Urban Area.	NESDRI 2023	May 2025	978-93-48717-26-9
13	Mrs. Nitya Sanghvi Mrs. Aditi Patidar Mrs. Richa Jain Mr. Harshit Jain	CE	IoT Applications in Structural Health Monitoring	NESDRI 2023	May 2025	978-93-48717-26-9
14	Dr. Praveen Patel	FT	Exploration of Fire and Safety Models in Automobile Parts Manufacturing Industry Under Fire Emergencies Management	The Significance of Multidisciplinary Research in Driving Innovations and Breakthroughs	March 2025	978-93-95305-10-5
15	Dr. Manish Dubey	FT	Safety and Risk Management in the Construction Industry of Cryogenic Air Separation Plants	The Significance of Multidisciplinary Research in Driving Innovations and Breakthroughs	March 2025	978-93-95305-10-5
16	Dr. Aditya Tiwary	FT	Fire Risk Prediction by using Machine Learning models in Electric vehicles Lithium ion batteries	Recent Research Trends of AI in Various Streams of Engineering and Management	March 2025	978-93-95305-47-1
17	Mr. Vinit Banodha	FT	Job Safety Analysis (JSA) on Waste Processing Industries and Measuring Risk on Risk Metrix	The Significance of Multidisciplinary Research in Driving Innovations and Breakthroughs	March 2025	978-93-95305-10-5

18	Dr . Sumit Bhatiya	FT	Evaluating Respiratory Health Practices and Safety Outcomes among Petrochemical Workers Using the Andersen Model	The Significance of Multidisciplinary Research in Driving Innovations and Breakthroughs	March 2025	978-93-95305-10-5
19	Veerendra Suryawanshi	FT	Evaluation of Occupational Health and Safety Measures for employees in thermal power plants utilizing statical methods.	Recent Research Trends of AI in Various Streams of Engineering and Management	March 2025	978-93-95305-47-1
20	Dr. Vaishali Gupta	CSE	Fabrication of Sensors less Automated Guided Vehicle for Small Warehouse Rack Management"	INTERNATIONAL CONFERENCE [ICCCIT 2025] · "Computational, Communication and Information Technology"	Mar, 2025	DOI: 10.1109/ICCCIT 62592.2025.109 27844
21	Ved Kumar Gupta	CSE	Enhancing NLP for Indic Languages With Limited Resources: A Study of Transformer Models for Translation and Summarization	2025 International Conference on Computational, Communication and Information Technology (ICCCIT)	2025	ISBN:979-8-3315-1296-5
22	Ved Kumar Gupta	CSE	Summarization of Sanskrit Text: Approaches and Techniques	2025 International Conference on Computational, Communication and Information Technology (ICCCIT)	2025	ISBN:979-8-3315-1296-5
23	Vandana Dubey	CSE	A Comprehensive Comparison of Machine Learning Classification Techniques for Early Detection of Alzheimer's Disorder	2025 International Conference on Computational, Communication and Information Technology	2025	ISBN:979-8-3315-1296-5

				(ICCCIT)		
24	Dr. Neeraj Shrivastava	CSE	MEL Frequency features driven deep learning for speech emotion detection: A Novel Model	International conference on computational and information technology(ICCCIT)	Feb-25	979-8-3315-1297-2 ISBN
25	Dr. Neeraj Shrivastava	CSE	Spectrum sensing techniques in cognitive radio based wireless regional area network: A Review	International conference on computational and information technology(ICCCIT)	Feb-25	979-8-3315-1297-2 ISBN
26	Diwakar Singh	CE	Road Safety Audit of National Highway 47 (Bhawarkua Square to Rau Circle in Indore Region	3 Day International Conference on Applications of SMART Technology in Multi Disciplinary Areas 2024	Nov-24	
27	Dr. Vaishali Gupta	CSE	UPI Based Financial Fraud Detection using Deep Learning Approach	International Conference on Advances in Computing Research on Science Engineering and Technology (ACROSET)	Sep-24	979-8-3503-8881-7
28	Dr. Rekha Dhoot	Humanity	Ideal International E Publication	Procedings - National Conference on "Education & Multi-Cultural Issues: A Socio –Approach for the ease of Entrepreneurship & Sustainable Development	Sep-2024	978-81-971906-0-5
29	Mr. Shubham Kanungo	ME	A Comparative Analysis of impact of Indian Patent Amendment Rules 2024 for Applicants, Patentees, and Industry Stakeholders	ICI³-2024: International Conference on Innovation, Incubation, and IPR at Acropolis Institute of Technology	Oct-24	

				and Research, Indore		
30	Mr. Shubham Kanungo	ME	Exergy Analysis of Vapor Compression-Absorption Cascaded Refrigeration System Utilizing Artificial Intelligence (AI)	International Conference (BAMS-2024) being organized by Shailesh J. Mehta School at Indian Institute of Technology, Bombay	Dec-24	
31	Mr. Shubham Kanungo	ME	Leveraging IoT and Decentralized Systems to Achieve SDGs through Reduced Emissions, Carbon Footprints, and Bio-Manure Production	International Conference at IIM Bodhgaya	Feb-25	

Paper Presented (July 2024 - June 2025)

Sl. No.	Name of the teacher	Title of the paper	Title of the proceedings of the conference	Year of Presentation
1	Lalitesh Sinha, Devaanshi Jagwani, Manya Madhu	Estimation of rainfall runoff and determination of ground water by resistivity meter: a case study	10th Indian Young Geotechnical Engineers Conference (10th IYGEC, 2025)- IIT Indore	2025
2	Sonam Yadav, Omanshi Rathore, Yashu Yadav	Characterization and Evaluation of Biochar from Waste Biomass in Concrete	10th Indian Young Geotechnical Engineers Conference (10th IYGEC, 2025)- IIT Indore	2025
3	Pallavi Gupta, Anshu Jain, Krishna Gangrade	Numerical Modeling and Analysis of Slope in Jam Gate Hill, Khargone	10th Indian Young Geotechnical Engineers Conference (10th IYGEC, 2025)- IIT Indore	2025
4	Dr. Amit Sharma	Seismic Performance of Two Story Confined Masonry Building	10th Indian Young Geotechnical Engineers Conference (10th IYGEC, 2025)- IIT Indore	2025

Book Published (July 2024 - June 2025)

Sr. No.	Name of the Teacher	Title of the Book published	Year and month of publication	ISBN of the Book/Conference Proceeding	Name of the Publisher
1	Dr. Rekha Dhoot	Soft Skills & Interpersonal Communication	2025	978-93-48717-59-7	Guru Shishya Publication
2	Prashant Sharma, Abhilasha Vyas Pandey, Pratik Jain, Arth Sharma	Blockchain Technology: Principles and Practices	01-09-2025	978-93-48717-08-5	Guru Shishya Publication
3	Dr. Dhanraj Verma, Dr. Vandana Kate, Pratik Jain, Amit Verma	Object Oriented Programming with C++: Concepts, Principles & Best Practices	27/02/2025	978-93-48717-99-3	Guru Shishya Publication
4	Narendra Kumar Sahu, Pratik Jain, Atharv Parsai	Algorithms: Analysis, Design & Optimization	25/03/2025	978-93-48717-13-9	Guru Shishya Publication
5	Dr. Nisha Agrawal Dr. Neha Yadav	Engineering Mathematics for Calculus	February, 2025	ISBN Number: 978-93-48717-81-8	Guru Shishya Publication
6	Arvind Upadhyay	Computer Architecture	Sep-24	978-93-341-2447-7	Guru Shishya Publication
7	Arpita Bhatia, Arvind Upadhyay, Kapil Vyas	Concepts of Object Oriented Programming	Nov-24	978-93-48717-74-0	Guru Shishya Publication
8	Kapil Vyas	Understanding Data Structure and Algorithm	2024	978-93-341-4047-7	Self Publication

9	Priyanka Vijayvargiya	Java Programming	Aug-24	978-93-6260-770-6	Charulata Publications
10	Pushpa Bansiwal	Mastering C the Core of Programming	10-Sep-24		Guru Shishya Publication
11	Pushpa Bansiwal	Web Development for Beginners	Oct-24		Guru Shishya Publication
12	Pushpa Bansiwal	Computer Architecture	Oct-24		Guru Shishya Publication
13	Pratik Jain	Mastering C the Core of Programming	Aug-24	978-93-341-1212-2	Guru Shishya Publication
14	Pratik Jain	Computer Architecture by Guru-Shishya	Jun-24	978-93-341-2447-7	Guru Shishya Publication
15	Pratik Jain	Web Development for Beginners	Jun-24	978-93-341-4266-2	Guru Shishya Publication
16	Pratik Jain	Concepts of object oriented programming	Oct-24	978-93-48717-74-0	Guru Shishya Publication
17	Bhawana Lakhani	Fundamentals of Internet of Things	Nov-24	978-93-48717-31-3	Guru Shishya Publication

Book Chapters Published (July 2024- June 2025)

Sl. No.	Name of the teacher	Title of the Book	Title of the book chapters published	Year of publication	ISBN/ISSN number of the proceeding	Name of the publisher
1	Dr. Rekha Dhoot	Nevigating Indian Knowledge System for Vikshit Bharat,Language	Literature & Indian Knowledge System	2025	978-93-48059-95-6	Bharti Publication
2	Dr. Rekha Dhoot	Culture, Identity and Humanities, Confluence of Indian Languages into Multilingualism:	Cultural & Identical Transformations	2025	979-8-89656-979-5	Yale University Press

D. MoU(s)

Organization with which MoU is signed	Name of Coordinators corporate house	Year of signing MoU	Duration	List the activities under each MOU year-wise
Cadence Academic Network	Dr. Rupesh Dubey	12-09-2024	3 Years	Lecture + Career Counseling
Girl Script Summer of Code	Girl Script Summer of Code	15-11-2024	3 Years	Lecture + Career Counseling
Maven Silicon	Maven Silicon	24-11-2024	3 Years	Lecture + Career Counseling
Young Leaders Foundation	Young Leaders Foundation	23-07-2024	3 Years	Lecture + Career Counseling

E. Collaboration (s)

Sl. No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration	Nature of the activity
1	Activation of carbon	BITS Dubai Dubai International Academic City P.O. Box: 345055, Dubai, UAE	Suhani Kataria	2024-25	6 Month	B. Tech Project work
2	Assessment of Water Quality Using QGIS: A Geospatial Approach for Sustainable Resource Management	BITS Pilani 9H7R+F67, BITS, Pilani, Vidyavihar, Rajasthan 333031	Dr. Devaanshi Jagwani	2023-25	2 years	M. Tech Project Work (Degree awarded)
3	A Study of Performance of Multi Storey RCC Frame with Transfer Girder Under Seismic Excitation	RRCAT Indore Parmanu Nagar, Sahkar Nagar Extension, 1, CAT Rd, Rajendra Nagar, Indore, Madhya Pradesh 452013	Vivek Pathak	2024-25	1 year	M. Tech Project Work
4	Three-Dimensional Grid-Characteristic Schemes of High Order of Approximation	MIPT Russia	Dr. Amit Sharma	2024-25	3 year	Research paper published in Journal "Doklady Mathematics" (ISSN-2686-9543)

H. Patent (s)

S. No.	Patents / Copyright Approved	Name	Year	Status
1	AI Based Control Unit for Welding Plant (442405-001)	Mrs. Shalini Dwivedi	2024	Dated 29/12/2024 **Granted**
2	Predictive Maintenance System For Industrial Machinery Using artificial Intelligence (202421041975)	Mrs. Shalini Dwivedi	2024	Dated 28/06/2024 **published**
3	AQI monitoring device with high efficiency biomass conversion for sustainable energy generation	Dr. Varsha Sharma	2025	Examination report has been generated, online reply document received (FER generated on 10/02/2025)
4	Artificial Intelligence based water quality monitoring device (421168001)	Ms lalita bargadiya	2024	25/6/2024 Published
5	Cloud Banking transition security device (436684001)	Ms lalita bargadiya	2024	7/11/2024 Published
6	IOT based smart parking system (421168001)	Ms lalita bargadiya	2024	25/06/2024 Published
7	Industrial Water Treatment Machine (424541-001)	Mr. Vikas Vishwakarma	2024	Design Granted 24-7-2024
8	Photo-catalysis Device for wastewater Treatment (423991-001)	Mr. Nitesh Parmar	2024	Design Granted 20-7-2024
9	IOT Enabled Solar Equipment for Solar Energy Collection and Distribution (422071-001)	Mr. Hemant mehar Mr. Kamlesh Gupta	2024	Design Granted (3-7-2024)

10	Concrete Hydraulic Hopper with Lift Mixer Machine. (UK Design- 6375529)	Dr. Mohd. Nasim Mr. Vijay Kumar Baradiya	2024	Design Granted 11-7-2024
11	Machine vision based colorimetric test kit for arsenic identification in water (389145-001)	Dr. Archana Keerti Chowdhary Dr. Devaanshi Jagwani Dr. Mohd. Nasim	2024	Design Acepted Certificate of Design not Generated 29-8-24

I. **International Conference**

(a) Two-Day International Conference on "Emerging Practices in Contemporary Language and Literature"

The Department of Humanities at IPS Academy, Institute of Engineering and Science, Indore, proudly hosted a two-day International Conference on "Emerging Practices in Contemporary Language and Literature" on April 24 and 25, 2025. Sponsored by COEMPT, EDU Teck Pvt. Ltd., the conference aimed to foster critical engagement with current trends in global language and literary studies, providing a vibrant platform for scholarly exchange among academics, researchers, and industry professionals.

Over the course of two days, five technical sessions were conducted, covering diverse sub-themes including Digital Humanities, Translation Studies, Postcolonial and Feminist Literature, Language Pedagogy, Cultural and Comparative Literature etc. Participants presented original research that sparked meaningful dialogue, collaborative opportunities, and scholarly networking.

The conference witnessed an overwhelming response, receiving abstract submissions from across India and abroad. Following a rigorous peer-review process by a distinguished academic review committee, best research papers were selected for presentation. The event adopted a hybrid format, hosting five meticulously organized technical sessions conducted both online and offline, which significantly enhanced national and international participation. Each technical session was chaired by renowned academicians who were also entrusted with selecting the Best Paper Presenter based on criteria such as originality, depth of research, and presentation skills.
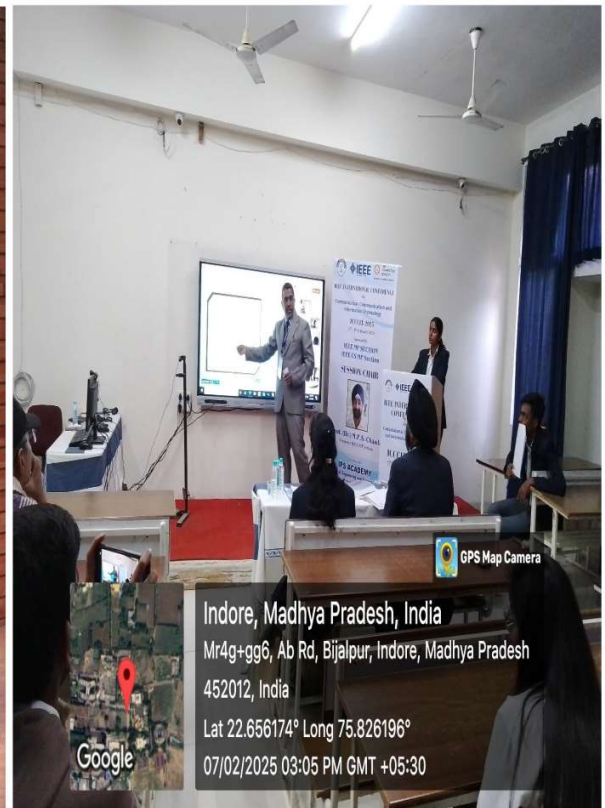
(b) IEEE International Conference on Computational, Communication, and Information Technology (ICCCIT - 2025)

The **IEEE International Conference on Computational Communication and Information Technology 2025** was successfully held from **7th to 8th February 2025**, organized by the **Department of Computer Science and Engineering** at IPS Academy Institute of Engineering and Science, Indore, and sponsored by the **IEEE Madhya Pradesh Section** and **IEEE Computer Society MP Section**. This two-day event brought together researchers, professionals, industry person, and students to exchange knowledge and discuss the latest advancements in the fields of computational communication and information technology.

Dr. Neetesh Purohit, Director, SGSITS, Indore, served as the Chief Guest and delivered an inspiring opening address. Conference also joined by **Dr. G.S. Tomar**, Chairperson of IEEE MP Section & Director, GEC, Sonbhadra, and **Prof. R.K. Pateriya**, Professor at MANIT, Bhopal, as **Guests of Honor**, who shared valuable perspectives on the role of technology in advancing research and innovation.

The conference featured 8 parallel sessions on the first day, where participants presented their research papers, evaluated by session chairs and supported by faculty members and students. These sessions facilitated extensive academic discussions and knowledge exchange. The second day also saw 8 parallel sessions where participants presented their research papers. The diversity of topics covered reflected the cutting-edge developments in computational communication and information technology.

The conference concluded with a heartfelt thanks to all participants, speakers, and contributors for their involvement, making this event a resounding success. It has provided an exceptional platform for fostering collaboration, exchanging ideas, and advancing research in these critical fields of technology. The organizing committee is grateful for the support of the IEEE Madhya Pradesh Section, IEEE Computer Society MP Section, and all other stakeholders who helped in bringing this conference to fruition.

Indore, Madhya Pradesh, India
Mr4g+gg6, Ab Rd, Bijalpur, Indore, Madhya Pradesh
452012, India
Lat 22.656174° Long 75.826196°
07/02/2025 03:05 PM GMT +05:30

Indore, Madhya Pradesh, India
Mr4g+gg6, Ab Rd, Bijalpur, Indore, Madhya Pradesh 452012,
India
Lat 22.656464° Long 75.826078°
08/02/2025 02:07 PM GMT +05:30

J. Special lecture(s)

Sr. NO.	Title	Details of Experts	Date of lecture Delivered
1	Expert lecture on "Guidance for Research Paper Writing"	Dr. Abhinesh Prajapati, Professor, IPS Academy, IES	21/04/2024

F. Ph.D Awarded

(1) Dr. Harish Dwivedi (CE)

(2) Dr. Kalyani Tiwari (CSE)

(3) Dr. Rupesh Dubey (EC)

(4) Dr. Pooja Bhatta (Ex)

(5) Dr. Satish Raghuwanshi (ME)

Proposals Submitted

S. No	Funding Agency	Proposal Type	Title	PI/Coordinator	CO-PI/ Co-coordinator	Dept.	Nature of proposals
1	AICTE	AICTE-ATAL	"Renewable to Sustainable - Smart Approaches in Construction"	Dr. Ashish Nim	Mr. Neeraj Mishra	CE	FDP
2	AICTE	AICTE-VAANI	"5G and Internet of Things"	Dr. Indra Kumar Shah	Dr. Sharad Jain	CSE (IoT)	Workshop
3	AICTE	AICTE-VAANI	"Energy, Sustainability & Climate Change: Challenges and Innovation"	Dr. Kanti Kumar Athankar	Dr. Deepak Sharma	CM	Workshop
4.	AICTE	AICTE-VAANI	"Manufacturing and Industry 4.0"	Mr. Ashwini Joshi	Mr. Mayank Gurjar	ME	Workshop
5	AICTE	AICTE-VAANI	"Empowering Safety Culture for Sustainable Future Advancements in Smart Cities"	Dr. Praveen Patel	Dr. Sumit Bhatiy	FT	Workshop
6	AICTE	AICTE-IKS	"Integrating Traditional Water Wisdom in to Sustainable Urban Water Management"	Dr. Archana Keerti Chowdhary,	Dr. Devaanshi Jagwani, Mr. Lalitesh Sinha	CE	Research Project
7	AICTE	AICTE-IKS	"AI-Enabled Portable Gobar Gas System: Harnessing Indian Traditional Knowledge and Solar Energy for Community Kitchens and Diverse Heating Applications"	Dr. Satish Raghuwanshi.	Mr. Shubham Kanungo	ME	Research Project
8	AICTE	AICTE-IKS	"Exploring the Efficacy of the Bhagavad Gita - As It Is in Managing Depression and Anxiety Among College Students: A Case Study with AI Analysis	Dr. Kavita Soni	Mr. Shubham Kanungo	Ex and ME	Research Project

			and Monitoring Devices"				
9	AICTE	AICTE-IKS	Revitalization of Traditional Adsorbents for the Treatment of Kanh River of Indore	Dr. Rajesh Kumar Kaushal	Dr Shamal Sen Dr Kanti Kumar Aathankar	CM	Research Project
10	AICTE	AICTE-IKS	Reviving Eco-Friendly Ancient Water Management Systems for Sustainable Modern Water Distribution	Dr. Archana Keerti Chowdhary,	Dr. Devaanshi Jagwani, Mr. Lalitesh Sinha	CE	Research Project
12	ANRF	ANRF-Seminar/ Symposia	Climate Change: Recent Trends and Advancement for sustainable solution and strategies for a greener future	Dr. Ranjana Choudhary Ahirwar	-	CM	Workshop
13	ANRF	ANRF-JC Bose Grant	Seismic performance of existing masonry structures	Dr. Amit Sharma	-	CM	Research Project
14	ANRF	ANRF-JC Bose Grant	Commercialization of electrocoagulation process for the treatment of real industrial effluents: Experience towards novel approach	Dr. Abhinesh Kumar Prajapati	-	CM	Research Project

Acknowledgement

The R & D Cell acknowledges the support provided by the following funding agencies, industries and research collaborators: