


## RIE BHOPAL, Faculty Profile (Last five years from 2019-2025)

<b>Full Name:</b>	Sandeep Kumar Ratnere			
<b>Designation:</b>	Work Education Teacher (Electrical)			
<b>Department:</b>	Department of Education in Science and Mathematics			
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<b>Education Qualification:</b>	Diploma in Electrical Engineering			
<b>Teaching Experience:</b>	18 Years	<b>Research Experience:</b>		
<b>Academic Identity:</b> (i) ORCID Id with web link  (ii) Scopus Author Id with web link  (iii) Researcher Institutional ID with web link  (iv) Google Scholar Id with web link  (v) Vidwan Id: with web link  (vi) Research gate Id with web link				
<b>Research Interest and Fields of Specialization</b> Electrical and Electronics Engineering				
<b>Member of Academic Institutions (Board of Studies / Research Degree Committee/School Board)</b> <b>Present/ Past</b>				

### 1. Projects Done by Teacher during the Last Five Years:

Sl. No.	Name of Coordinator	Duration of Project	Name of the Project	Name of Funding Agency	Year of Sanction
01	Sandeep Kumar Ratnere	12 Month	PAC-16.21 and PAC-16.57 Development of Makerspace and Incubation Center in Electrical and Electronics Lab at RIE Bhopal.	NCERT	2019-20
02	Sandeep Kumar Ratnere	12 Month	PAC-16.23 and PAC-23.11 Orientation of Artificial Intelligence (AI) and development of AI Module for Class-VIII Students of D.M.S, Bhopal (Inspire Module)	NCERT	2020-21
03	Sandeep Kumar Ratnere	12 Month	PAC-23.10 and PAC-23.22 Development of STEAM Modules for Middle School Stage in the light of NEP-2020	NCERT	2021-22
04	Sandeep Kumar Ratnere	12 Month	PAC-23.21 Development of Coding Modules for Middle School Stage in the light of NEP-2020	NCERT	2022-23

### 2. Papers Published by the Teacher during the Last Five Years:

Sl. No	Name	Title of the Paper	Title of the Book Published	National / International	Year of Publication
01	Sandeep Kumar Ratnere	Introduction of "Mechatronics" for Knowledge and Skill Development of the Students of Secondary and Senior Secondary Stage	International Conference on Emerging Trends & Innovation in School Sciences	International Conference	February 6-8, 2019
02	Sandeep Kumar Ratnere	Gandhian Philosophy on Work Education: In the scenario of Industry 4.0 कार्यानुभव शिक्षण में गांधी दर्शन: चतुर्थ औद्योगिक क्रांति (Industry 4.0) के परिदृश्य में।	National Conference on implication of Gandhian Thoughts for School Curriculum	National Conference	January 30-31, 2020
03	Sandeep Kumar Ratnere	STEM Makerspace @School: In the Scenario of National Education Policy 2020	National Conference on Integration of STEAM in School Education	National Conference	February 26-28, 2021
04	Sandeep Kumar Ratnere	Development of STEAM Module for Middle School Stage: An Innovative Exemplar	National Conference on Recent Advances in Science Education	National Conference	February 26-28, 2024

### 3. The Book Chapter was written by the Teacher during the last Five Years:

SI. No.	Name of the Teacher	Title of the Book Published:	Title of the Chapter:	Name of the publisher: National / International	National / International: ISBN/ISSN number of the Proceedings	Year of Publication
01	Sandeep Kumar Ratnere	<b>Consumer Energy Meter Technician</b> Qualification Pack: Ref. Id. PSS/Q0107 Sector: Power Textbook for Class IX	<b>Unit 1: Electricity</b> Session 1: Electricity Generation Concept Session 2: Basic Units and Effects of Electric Current 3: Concept of Electrical Power and Energy Session 4: Importance of Earthing System	PSSCIVE/ NCERT		2019-20
<b>Total Chapter</b>						<b>04</b>

### 4. Engagement of Sandeep Kumar Ratnere in International Project during the last five years:

SI. No.	Description	Particular
01	Korea Research Institute for Vocational Education and Training ( <b>KRIVET</b> ), South Korea	Working on the project titled - Curriculum Development and establishment of lab in Mechatronics at DMS Bhopal, in collaboration with KRIVET, South Korea and PSSCIVE, Bhopal
02	Curtin University, Perth, Western Australia	Worked on the project titled – Project-Based STEM with Curtin University, Perth, Western Australia

### 5. Administrative Contributions of Sandeep Kumar Ratnere during the last five years:

SI. No.	Description	Particular
01	Civil and Electrical Maintenance	Supervise the Institute Building, Hostels, RIE Campus for Civil and Electrical Maintenance and deal with CPWD (Civil and Electrical) under the Planning and Development Committee (PDC)
02	e-Office of NCERT	Helping the administration for implement the e-Office of NCERT in RIE, Bhopal as a Nodal Officer.

### 6. Notable Contributions of Sandeep Kumar Ratnere to DESM during the last five years:

Converted Electrical and Electronics Lab as STEM Makerspace in Room No-64 that aims to promote hands-on learning experiences in Science, Technology, Engineering, and Mathematics (STEM) fields. It is designed to provide a collaborative workspace where individuals can come together to create, design, and innovate using various tools and technologies. This Makerspace provides access to a wide range of equipment and materials, such as Electrical and Electronics Tools and Equipment, 3D Printers, Robotics kits, Coding tools, and Art supplies. Participants can use these
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resources to explore and experiment with different STEM concepts and develop their skills and knowledge. Makerspace also offers workshops, events, and mentorship opportunities to help participants to learn and grow. It encourages individuals to work together, share ideas, and collaborate on projects to foster creativity and innovation. In the Makerspace of RIE, Bhopal individuals of all ages and backgrounds can discover new passions and explore the world of STEM in a fun and engaging way.