



**MANAV RACHNA  
UNIVERSITY**

Declared as State Private University vide Haryana Act 26 of 2014

# **ANNUAL REPORT**

**ACADEMIC YEAR  
2018-19**

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## **“Manav Rachna”**

Manav Rachna carries forward the mantle of excellence and professionalism with the philosophy of Manav Rachna.

## **“Vidyantariksha”**

This is a conjunction of the words ‘vidya’ and ‘antariksha’. “Vidya means knowledge, information, the basis of creativity and innovation. It is the foundation of technology and envisages the future. “Antariksha means ‘the sky’ the space which we belong to or exist. It can be broken into ‘antar’ and ‘ikshan’ which means inner vision. Hence the combination, the core promise of Manav Rachna becomes “the reality of inner vision or root of all knowledge”.

# **OFFICERS OF THE UNIVERSITY**

## ***CHANCELLOR***

Dr. Prashant Bhalla

## ***VICE CHANCELLOR***

Prof. (Dr.) Sanjay Srivastava up to 31.01.2019

Prof. (Dr.) IK Bhat w.e.f 01.02.2019

## ***PRO VICE CHANCELLOR***

Prof. (Dr.) Meenakshi S Khurana up to 31.12.2018

## ***REGISTRAR***

Dr. Kameshwar Singh

## ***DEAN ACADEMICS***

Prof. (Dr.) Meenakshi S Khurana up to 31.12.2018

Prof. (Dr.) Sangita Banga w.e.f 17.10.2018

## ***DEAN RESEARCH***

Prof. (Dr.) B M Bahal up to 11.03.2019

Prof. (Dr.) Pradeep Kumar Varshney w.e.f 12.03.2019

## ***DEAN STUDENTS' WELFARE***

Prof. (Dr.) Sangita Banga up to 29.10.2018

Prof. (Dr.) Shruti Vashist w.e.f 01.04.2018

## ***PROCTOR***

Prof. (Dr.) D K Sharma

## ***DEPUTY CONTROLLER OF EXAMINATION***

Ms. Shefali Chopra

**DEANS OF FACULTIES**

***FACULTY OF ENGINEERING  
AND  
FACULTY OF LAW***

Prof. (Dr.) Sangita Banga

***FACULTY OF APPLIED SCIENCES***

Prof. (Dr.) B M Bahal upto 31.05.2019  
Prof. (Dr.) Pradeep Kumar Varshney wef 1.06.2019

***FACULTY OF MANAGEMENT & COMMERCE***

Prof. (Dr.) Parul Jhajharia

***FACULTY OF EDUCATION & HUMANITIES***

Dr. Babita Parashar

# CHAPTER-1

## ABOUT THE UNIVERSITY

### 1.1 Approval of Statutory Bodies

Manav Rachna University is a State Private University (established by Haryana State Legislature Act No 26 of 2014 & under section 2(f) of UGC Act 1956). The University has evolved from Manav Rachna College of Engineering (MRCE), a NAAC Accredited 'A' Grade institute.

### 1.2 Vision

MRU envisions to be a Centre for knowledge generation, dissemination and transfer in the frontier areas, which derives impetus from various disciplines of sciences, humanities and technology and generates globally relevant human resource and knowledge which addresses the future issues / needs of society.

### 1.3 Mission

- To impart outcome based holistic education
- To disseminate education in frontier areas
- To produce globally competitive, ethical and socially responsible human resources
- To produce human resources sensitive to issues of Environment and Sustainable Development
- To develop Environment and Sustainable development as thrust area of research and development.

## 1.4 Governance

| S.No  | Boards And Committees  |
|-------|--|
| 1.4.1 | <p data-bbox="296 356 523 389"><b>Governing Body</b></p> <p data-bbox="296 427 1450 792">The Governing body is the highest decision-making authority of the University. All the movable and immovable property of the University vests in it. The Governing Body provides general superintendence and direction to the University and in particular, regulates and controls the functioning of the University in accordance with the provisions of the applicable Acts, Statutes, Ordinances, Rules, Regulations, Notifications and Orders etc. In academic year 2018-19, the Governing Body met four times i.e. on 11th September, 2018, 30th October, 2018, 3rd January, 2019 and 21st May, 2019.</p> <p data-bbox="296 869 424 902"><b>Members</b></p> <ol data-bbox="304 925 1070 1765" style="list-style-type: none"><li>1. Dr. Prashant Bhalla, Chancellor / Chairman</li><li>2. Dr. Amit Bhalla, Vice President, MREI</li><li>3. Prof. I.K. Bhatt, Vice Chancellor</li><li>4. Ms. Anita Chaudhary, IAS (Retd.) Former Secretary, GOI</li><li>5. Dr. M.M. Kathuria, Trustee, UET</li><li>6. Dr. N.C Wadhwa, Vice Chancellor, MRIU</li><li>7. Prof. Sanjay Srivastava, Vice Chancellor</li><li>8. Col. (Retd.) V.K. Gaur, Advisor, MREI</li><li>9. Dr. Shalini Tuli, Associate Professor, Govt. College</li><li>10. Prof. Sangita Banga, Dean Academics, MRU</li><li>11. Sh. Amit Kumar, FCA</li><li>12. Dr. K. Singh, Registrar (Member-Secretary)</li></ol> |



### **Board of Management**

The Board of Management (BoM) is the Chief Executive body of the University and works under the overall directions of the Governing Body. The role of BoM is to establish and monitor the achievement of the University's mission and Objectives. This includes, formulation and monitoring of academic standards, benchmarks and goals; establishment of academic and research units; supervision of the University's finances and budgetary processes; conducting institutional performance evaluations; compliance of the University's statutory and regulatory responsibilities; liaison with external agencies and evaluation of the performance of the senior University functionaries. In academic year 2018-19, the BOM met four times i.e. on 12th July, 2018, 16th October, 2018, 15th December, 2018 and 7th May, 2019.

1.4.2

### **Members**

1. Prof. I.K. Bhatt, Vice Chancellor-Chairman
2. Dr. Amit Bhalla, Vice President, MREI
3. Dr. M.M. Kathuria, Trustee, UET
4. Sh. Rajeev Kapoor, ED & Group HR-Head, Uno Minda
5. Dr. Shalini Tuli, Associate Professor, Govt. College (Govt. Nominee)
6. Mr. Navdeep Chawla, President – FIA
7. Prof. Sangita Banga, Dean Academics, MRU
8. Prof. Parul Jhaharia, Dean and Head, Faculty of Management & Commerce
9. Prof. Joshe P. Verghese, Professor Emeritus, Faculty of Law, MRU
10. Prof. Versha Vahini, Head, Department of Law, MRU
11. Dr. Babita Parashar, Dean – Faculty of Education & Humanities, MRU
12. Ms. Hanu Bhardwaj, Head-Department of Computer Science Engineering, MRU
13. Dr. K. Singh, Registrar (Member-Secretary)

### **Academic Council**

The Academic Council is the principal academic body of the University. It exercises general supervision over the academic policies of the University, subject to the provisions of the Act, Statutes, Ordinances of the University, The Academic Council is responsible for evaluation and approval of overall educational policy, academic degree programs, requirements for admission, academic honors and awards etc. at the University. In academic Year 2018-19 the Academic Council met four times i.e on 6th June, 2018, 28th September, 2018, 7th December, 2018 and 22nd April, 2019.

### **Members**

1.4.3

1. Prof. I.K. Bhatt, Vice Chancellor-Chairman
2. Prof. Raj Senani, Professor Emeritus, Netaji Subhash University of Technology
3. Prof. Anita Rastogi, Professor JMI, Delhi
4. Prof. Pilli Emmanuel, Associate Professor MNIT, Jaipur
5. Prof. Kanupriya Sachdeva, Professor MNIT, Jaipur
6. Prof. Devender Kumar, Professor Delhi Technological University, Delhi
7. Prof. G.S. Bajpayee, Professor & Registrar, National Law University, Delhi
8. Sh. Ajay Kabra, Sr. Director – Agile Transformation Xebia India
9. Sh. Pradeep Kumar, Head Channels Sales, Altair Engineering
10. Dr. S.K. Goyal, Executive Director (SAARC)
11. Prof. (Dr.) S.K. Garg, Pro-VC, Delhi Technical University,
12. Prof. (Dr.) R.K. Singh, School of Economic, New Delhi
13. Prof. Sangita Banga, Dean Academics
14. Prof. Parul Jhaharia, HoD & Dean Management
15. Prof. Pardeep Kumar Varshney, Dean Reseach
16. Prof. Versha Vahini, HoD, Law
17. Dr. Babita Parashar, Dean Education
18. Prof. Shruti Vashisht, HoD-ECE & Dean, DSW
19. Sh. Jaideep Singh, Director, Industry Interaction.
20. Ms. Hanu Bhardwaj, HoD, CST
21. Prof. Sujata Nayak, HoD, Mechanical Engineering
22. Dr. Sudhish Shukla, HoD, Chemistry
23. Dr. Rashee Singh, HoD, Education
24. Dr. Deepa Arora, HoD, Mathematics

|       |   |
|-------|---|
|       | <p>25. Prof. A.K. Gupta, Professor, Chemistry</p> <p>26. Prof. D.K. Sharma, Professor, Physics</p> <p>27. Prof. Susmita Ray, Professor, Computer Science</p> <p>28. Dr. Pragati Chauhan, Associate Professor, Management</p> <p>29. Ms. Meena Kapahi, Associate Professor, Chemistry</p> <p>30. Dr. Jyoti Pruthi, Associate professor, CSE</p> <p>31. Dr. Jai Prakash, Associate Professor, Physics</p> <p>32. Dr. K. Singh, Registrar (Member-Secretary)</p>   |
| 1.4.4 | <p><b>Finance Committee</b></p> <p>The Finance Committee is the principal financial body of the University. The main task of the Committee is to take care of the Financial matters of the University. In academic year 2018-19, the Finance Committee met thrice i.e. on 27th September 2018, 15th October 2018 and 27th April 2019.</p> <p><b>Members</b></p> <ol style="list-style-type: none"> <li>1. Prof (Dr.) I.K.Bhat, Vice Chancellor</li> <li>2. Dr. Amit Bhalla, Vice President, MREI</li> <li>3. Dr. M.M. Kathuria, Trustee, UET</li> <li>4. Prof. Sangita Banga, Dean Academics, MRU</li> <li>5. Sh. Amit Kumar, FCA</li> <li>6. Dr. Kameshwar Singh, Registrar MRU</li> <li>7. Sh. Rajeev Malhotra, Chief Finance &amp; Accounts Officer, Member Secretary</li> </ol> |
| 1.4.5 | <p><b>Advisory Board Faculty of Law</b></p> <p>The Advisory Board is constituted to advise, guide, supervise and steer the holistic growth of faculty of law so as to take it to the greater heights. In the academic year 2018-19, the Advisory Board conducted its meetings on 25th August 2018, 1st December 2018, 23rd February, 2019.</p> <p><b>Members</b></p> <ol style="list-style-type: none"> <li>1. Hon'ble Mr. Justice R.C. Lahoti (Former CJI) Chairman</li> <li>2. Hon'ble Mr. Justice Amitava Roy, Former Judge, Supreme Court of India</li> <li>3. Hon'ble Mr. Justice K.K. Lahoti (Former Acting Chief Justice, Hon'ble High Court of Madhya Pradesh) Member</li> </ol>  |

4. Hon'ble Mr. Justice Kailash Gambhir (Former Judge, Hon'ble High Court of Delhi) Member
5. Hon'ble Mr. Justice Rajiv Bhalla (Former Judge, Hon'ble High Court of Punjab and Haryana) Member
6. Mr. Atmaram Nadkarni (ASG, Government of India) Member
7. Mr. P. K. Malhotra, Former Law Secy., GOI
8. Mr. Arvind P. Datar, (Senior Counsel) Member
9. Mr. Ravindra Srivastav (Senior Counsel) Member
10. Mr. Parag Tripathi (Senior Counsel) Member
11. Mr. Gourab Banerji (Senior Counsel) Member
12. Mr. Sanjeev Sharma (Senior Counsel) Member
13. Mr. Gopal Jain (Senior Counsel) Member
14. Mr. Ashok Gupta (Senior Counsel) Member
15. Mr. Vinay Bhasin (Senior Counsel) Member
16. Mr. Jasbir Singh Bajaj (IAS) Member
17. Mr. R. K. Bajaj, Former Chief Commissioner – IT Member
18. Mr. Sudhir Sharma (Partner, Luthra & Luthra) Member
19. Mr. Anup Trehan (Partner, Access Law) Member
20. Mr. Shashank Garg (Partner, Advani & Co.) Convener
21. Mr. Divya Kant Lahoti, Special Invitee

## 1.5 Committees for Day to Day Functioning

A well-organized University set up requires a lot to be monitored for smooth functioning and overall excellence such as attendance, feedback, course uploading to name only a few in this regard. Managing this entire gamut is not a one man show but it requires a collaborative effort from all staff members. University therefore works in more decentralized manners through its various committees. These committees are empowered, have more autonomy and thus help in quick decision making. All the committees are headed by coordinators with defined roles and responsibilities to perform. Table below lists all the committees responsible for day to day functioning of University.

| COMMITTEES                 |   |   |
|----------------------------|---|---|
| Committee Name             | Coordinator & Team Members  | Roles and Responsibility  |
| <b>Board of Discipline</b> | Prof. (Dr.) D.K. Sharma, Professor – Chairman                                 | To consider the matter concerning maintenance of discipline among the students in the University  |
|                            | HoD concerned and Hostel warden to which act of indiscipline pertain – Member | To enquire into the act of indiscipline or misconduct committed by a student(s) whenever such cases are referred to the Board of Discipline and to submit their findings, conclusions, and recommendations for the quantum of punishment under the provision of this ordinance. |
|                            | Dr. Manmeet Bali Nag, Associate Professor – Member                            | To supervise and monitor the discipline ecosystem prevailing in the University  |
|                            | Ms. Manpreet Kaur, Associate Professor – Member                               | To maintain liaison with the police authorities and concerned departments of the Government, neighboring institutions and the authorities of the University regarding maintenance of law and order in the University.   |
|                            | Dr. S.K. Bose, Asst. Professor - Member                                       | To organize counseling session and liaising with parents of the guardians of the students.  |
|                            | Deputy Registrar (Academics) - Member Secretary                               | To perform such other functions as may be assigned to it by the Vice Chancellor from time to time.  |
|                            | Mr. A.K. Mishra (Permanent Invitee)   |   |
| <b>Annual Report</b>       | Prof. Sangita Banga, Dean Academics – Chairperson                             | The committee shall function under overall supervision and patronage of the Dean Academics and will be required to submit the Draft Annual Report within two months time.   |
|                            | Dr. Babita Parashar, Dean Faculty of Education & Humanities – Convenor        |   |
|                            | Prof. Shruti Vashisht, Dean - DSW –   |   |

|   |  |  |
|---|--|--|
|   | Member   |  |
|   | Dr. Megha Mittal, Associate Professor – Member |  |
|   | Prof. Versha Vahini, HoD-Law - Member          |  |
|   | Prof. Sujata Nayak, HoD-Mechanical – Member    |  |
|   | Ms. Yogita Guputa, Asst. Professor – Member    |  |
| Ms. Gaganjot Kaur, Asst. Professor – Member |  |  |

|  |  |  |
|--|--|--|
| <b>University Level Complaint Committee &amp; Women Cell</b> | Prof. Shruti Vashisht, - Chairperson   | Create and communicate a detailed policy.  |
|  | Prof. A.K. Gupta, - Member   | Ensure awareness and orientation on the sexual harassment at work place  |
|  | Prof. Versha Vahini, - Member  | Ensure complaint committee is trained in both skill and capacity.  |
|  | Ms. Hanu Bhardwaj, Associate Professor – Member                                | Prepare an annual report and report to the Vice Chancellor   |
|  | Mr. Sandeep Kumar, Associate Professor – Member                                |  |
|  | Dr. Archana Bhatia, Chairperson, Nari Uthan Shikshan Shashaktikaran – Member   |  |
| <b>Awarding Grace Marks</b>                                  | Dean Academics – Chairperson   | The committee shall function under overall supervision and patronage of the Dean Academics   |
|  | Dean Student Welfare – Member  |  |
|  | Controller of Examination – Member   |  |
|  | Dean Management – Member   |  |
|  | Registrar - Member Secretary   |  |
| <b>Documents/Reports and processes for updation of data</b>  | Ms. Meena Kapahi, Associate Professor- Chemistry – Coordinator                 | Team Assist to Dean Academics in Processing of Academic Documents / Reports as well as in developing system and processes for updation of data |
|  | Dr. Deepa Arora, Associate Professor & Head Maths - Co-Coordinator             |  |
|  | Dr. Roopa Rani, Asst. Professor-Chemistry – Member                             |  |
|  | Dr. Ananna Bardhan, Asst. Professor- Physics – Member                          |  |
|  | Dr. Manpreet Kaur, Associate Professor- CST – Member                           |  |
|  | Dr. Seema Sharma, Asst. Professor - Faculty of Education & Humanities - Member |  |
|  | Ms. Priyanka Maderna, Asst. Professor-law – Member                             |  |

|  |   |
|--|---|
|  | Dr. Pooja Kapoor, Associate Professor-Management – Member |
|  | Dr. Ankita Pandey, Asst. Professor-Maths – Member         |
|  | Mr. Bhanu, Asst. Professor-ECE - Member                   |
|  | Mr. Gianender, Asst. Professor-ME – Member                |
|  | Mr. Ram Chatterjee, Asst. Professor-CST – Member          |

|                           |   |   |
|---------------------------|---|---|
| <b>Website Committee</b>  | Dr. Mrinal Pandey, Associate Professor-CST - Coordinator                        | <p><b>The Website Coordinator Will:</b></p> <p>(1) Finalize Website Activity Calendar. (2) Managing Content (3) Maintaining Web Design (4) Maintaining continuity of themes, layout (5) Streamlining navigation (6) Updating contents (7) Ask from the Dean's HoD's for their respective areas contents and events information (8) Communicate with the Web Team to keep apprised of developments (9) Coordinating with the team members reviewing website contents time to time to match with the updations in the university information database (11) Give consolidated feedback to Dean's and HoD's</p> <p><b>The Website Team Members will:</b></p> <p>(1) Reviewing the specific portions of website for its contents accuracy (2) To be responsible for providing the data specific to the particular area and the formats in which it should be updated on the website (3) Participate in managing the contents and deciding the layout of the website (4) Participate in content writing for specific areas (5) Participate in website meetings (6) Participate in coordinating and communicating with other departments in fetching the information and data.</p> |
|                           | Ms. Garima Grover, Asst. Professor-ECE – Member                                 |   |
|                           | Ms. Gaganjot Kaur, Asst. Professor-CST – Member                                 |   |
|                           | Mr. Mandeep Bhadana, Asst. Professor-ME – Member                                |   |
|                           | Dr. Kiran Gupta, Associate Professor-Faculty of Education & Humanities – Member |   |
|                           | Dr. Ankita Pandey, Asst. Professor-Maths – Member                               |   |
|                           | Dr. Jaya Tuteja, Asst. Professor-Chemistry – Member                             |   |
| <b>Purchase Committee</b> | Mr. R.K. Malik, Deputy Registrar (Admin) – Chairman                             | <p>(1)To collect and analyze quotations from the Vendors (2)To complete documentation work relating to purchase (3) Ensure transparency and fairness in the procurement (4) Placing the order to vendor for supply of the stores (5) To get the entry of the stores in the Stock Register of the University</p>   |
|                           | Ms. Shefali Chopra, Deputy Registrar (R & S) – Member                           |   |
|                           | Mr. Bharat Bhushan, (Admin) – Member  |   |

|                                     |   |  |
|-------------------------------------|---|--|
| <b>Security Lapses &amp; Losses</b> | Prof. Versha Vahini, Professor – Chairperson        |  |
|                                     | Mr. Satish Arora, CVO – Member                      |  |
|                                     | Dr. Vikram Sharma, Library – Member                 |  |
|                                     | Mr. A.K. Mishra, Sports Officer - Member            |  |
|                                     | Mr. R.K. Malik, Deputy Registrar - Member Secretary |  |

|  |  |  |
|--|--|--|
| <b>Women Cell</b>                                      | Prof. Shruti Vashisht – Chairperson                                  | <p>(1) The complaint committee shall look into all the cases relating to sexual harassment of students/employees working in the University, investigate the same as per procedure laid down in the act and rules made therein and make recommendations to the competent authority for decision. (2) The complaint committee shall ensure complete confidentiality and shall not disclose the contents of the complaint, identity and address of complainant, respondent and witness and information pertaining to conciliatory/ inquiry proceedings or recommendations of the committee into the complaint to anyone as it is totally prohibited under the provisions of the said act.</p> |
|  | Prof. Sujata Nayak, HoD-Mechanical – Member                          |  |
|  | Dr. Babita Parashar, Dean Faculty of Education & Humanities – Member |  |
|  | Dr. Parneeta Dhallwal, Associate Professor – Member                  |  |
|  | Dr. Megha Mittal, Associate Professor - Member                       |  |
|  | Ms. Priyanka Maderna, Asst. Professor-law – Member                   |  |
|  | Dr. Manpreet Kaur, Associate Professor-CST – Member                  |  |
|  | Dr. Deepa Arora, Associate Professor & Head Maths – Member           |  |
| <b>Selection Committee (best intern for the award)</b> | Dr. Sangita Banga, Dean Academics – Chairperson                      | <p>The committee is required to select best three interns and make their names available to this office.</p>   |
|  | Ms. Meena Kapahi, Associate Pofessor-Chemistry – Member              |  |
|  | Dr. Babita Parashar, Dean Faculty of Educaiton & Humanities – Member |  |
|  | Mr. R.K. Malik, Deputy Registrar – Member                            |  |





## CHAPTER-2

### ACADEMICS AT MANAV RACHNA UNIVERSITY

Manav Rachna University, evolved in the year 2014 under the Haryana State Legislature Act No. 26 of 2014 from erstwhile Manav Rachna College of Engineering (MRCE), is flourishing with the gradual passage of time. During the last four years, University has been abuzz with activities and has surged forward in every respect. University has strengthened its academic profile by introducing contemporary, innovative and need-based programmes both at UG and PG level. University introduced inter-disciplinary courses in Engineering, Applied Sciences and integrated programs in Education, Law and Humanities, to name but few.

All the Engineering Programs offered under the Faculty of Engineering, are approved by AICTE. Manav Rachna University is bestowed with QS I-Gauge Gold rating. Manav Rachna University is among the Top 3 emerging Engineering Institutes of the country as per Times Engineering Institutes Survey 2019. It is also the second most promising and emerging institute for Placement and Research Capability. The University is declared as Nodal Centre for Virtual Labs, in association with IIT, Delhi and is a local chapter of NPTEL. MRU offers Law Programs approved and recognized by BCI and all the programmes offered under Faculty of Education are NCTE approved.

#### 2.1 Faculties of the University

- Faculty of Applied Sciences
- Faculty of Engineering
- Faculty of Management and Commerce
- Faculty of Education and Humanities
- Faculty of Law

Under the five Faculties, there exist different departments offering Undergraduate; Post Graduate and Doctoral Programs.

**2.1.1 Faculty of Applied Sciences:** Departments under the Faculty and Programs are:

##### **Department of Chemistry:**

- B.Sc. (Hons.) (3 year): Chemistry
- M.Sc. (2 year): Chemistry
- Ph.D

##### **Department of Mathematics**

- B.Sc. (Hons.) (3 year): Mathematics
- M.Sc. (2 year): Mathematics
- Ph.D

##### **Department of Physics**

- B.Sc. (Hons.) (3 year): Physics
- M.Sc. (2 year): Physics
- Ph.D

**2.1.2. Faculty of Engineering:** Departments under the Faculty and Programs are:

**Department of Computer Science and Technology**

- B.Tech. (4 year) / B.Tech. Lateral Entry (3 year) Computer Science & Engineering
- B.Tech. in Computer Science & Engineering with specialization in Data Science & Machine Learning.
- B.Tech. in Computer Science & Engineering with specialization in Digital Transformation Engineering.
- M.Tech. (2 year) Computer Engineering
- Ph.D

**Department of Electronics and Communication Engineering**

- B.Tech. (4year): Electronics and Computers
- M.Tech Electronics and Communication Engineering with Specialisation in Embedded System & VLSI
- Ph.D

**Department of Mechanical Engineering**

- B.Tech. (4 year): Mechanical Engineering
- B.Tech. Lateral Entry (3 year): Mechanical Engineering
- M.Tech. (2 year): Mechanical Engineering
- Ph.D

**2.1.3. Faculty of Management and Commerce:** Department under the Faculty is, Department of Management & Commerce. Programmes offered by Department of Management & Commerce are mentioned below:

**Department of Management and Commerce**

**Undergraduate programmes (3 year):**

- Bachelor of Business Administration (BBA- Finance & Accounts)
- Bachelor of Business Administration (BBA- Entrepreneurship & Family Business.
- Bachelor of Business Administration (BBA- Health Care Management)
- Bachelor of Business Administration (BBA-Operations Management with Specialization in Supply Chain Management, Logistics & Projects Management).
- Ph.D.

**2.1.4. Faculty of Education and Humanities:** Department under the Faculty and Programs are:

**Department of Education**

- Integrated B.Sc. B.Ed (4 year)
- Integrated B.A. B.Ed (4 year)
- B.Ed. (2 year)
- B.Ed. Special Education (2 year)
- Ph.D

**Department of Humanities:**

Department of Humanities supports all the departments by offering courses in Business English, Communicative English, Business Communication, Language Studies, Economics, Political Science and Soft Skill Development.

**2.1.5. Faculty of Law:** Department under the Faculty of Law offers following Programs:

**Department of Law**

- B.A. LLB (Hons.) (5 year)
- B.B.A. LLB (Hons.) (5 year)
- B.Com. LLB (Hons.) (5 year)
- LL.M (1 year)
- LL.M (2 year)

**2.2 Enrolment of Students**

Expansion of any institution can be gauged by the number of students enrolled in its programs. The increase in number of enrolments of students, year after year, indicates the popularity of University programmes.

| <b>Programme / Branch Name</b>                 | <b>Total No. of students</b> |
|--|------------------------------|
| Faculty of Engineering                         | 853                          |
| Applied Sciences                               | 129                          |
| BBA  | 237                          |
| Law  | 175                          |
| Education                                      | 162                          |
| <b>Total Students (UG)</b>                     | <b>1556</b>                  |
| <b>Total Students (PG) (M.Tech &amp; MSc.)</b> | <b>73</b>                    |
| <b>Total Students PhD.</b>                     | <b>75</b>                    |

## 2.3 Scholarship Policy

In the year 2018-19, a substantial sum of more than one crore, forty five lakh was awarded as scholarship. Scholarship policy of University encourages a good number of students every year and kindles the spirit of consistent performance. Elaborative policy details are as follows:

**Merit scholarship:** Aimed at promoting meritorious students, scholarship includes tuition fee waiver and is awarded to the students of UG/ PG Programmes) on the basis of marks/CGPA in the qualifying examination as per following scale, however the students are required to pay other fees as applicable to the programme concerned.

### UG Programmes

|                               |      |                    |
|-------------------------------|------|--------------------|
| 90.00% & above                | 100% | Tuition Fee waiver |
| 85.00% above but below 90.00% | 50%  | Tuition Fee waiver |
| 80.00% above but below 85.00% | 25%  | Tuition Fee waiver |

### PG Programmes

|                               |      |                    |
|-------------------------------|------|--------------------|
| 80.00% & above                | 100% | Tuition Fee waiver |
| 75.00% above but below 80.00% | 50%  | Tuition Fee waiver |
| 70.00% above but below 75.00% | 25%  | Tuition Fee waiver |

### Merit cum Means Scholarship

MRU offers Scholarship based on merit cum means, to the candidates admitted under reservation for Haryana Candidates. Scheme shall be applicable to all Undergraduate and Post Graduate Programs. The Scheme is applicable to all students whose parents have annual income up to Rs. 2.80 Lac from all sources. Under the scheme, the students shall be given fee waiver limited to the tuition fee as per the following scale. Candidates are required to pay other fee as applicable to the programme concerned.

- One fifth of the twenty five percent shall be granted full tuition fee concession,
- Two fifth of the twenty five percent shall be granted fifty percent fee concession,
- The balance two fifth of the twenty five percent shall be granted twenty five percent fee concession.

### Merit Scholarship to Semester/Branch Toppers

In order to motivate the students for better and sustained academic performance, MRU offers 'Merit Scholarship to Semester/ Branch Toppers' for students bagging 1st, 2nd and 3rd positions in the Odd & Even semester exams (Based on the amalgamated SGPA / CGPA) every year for each programme being run at MRU, as under:

|                    |   |  |
|--------------------|---|--|
| a) First position  | : | 25% of Tuition Fee or Rs.25,000/-<br>whichever is less |
| b) Second Position | : | 15% of Tuition Fee or Rs.15,000/-<br>whichever is less |
| c) Third Position  | : | 10% of Tuition Fee or Rs.10,000/-<br>whichever is less |

### The following are the guidelines for granting these Merit Scholarships:

- Any programme must have strength of 90 or more in semester exam to qualify for first, second and third position scholarship, otherwise only a solitary topper shall be given a solitary first position scholarship.
- If the strength of a course is 10 or less no scholarship will be awarded for that course.
- A student shall be eligible to benefit for tuition fee waiver only from one source only.

### Special Scholarship Awarded

- **Scholarship to Ph.D. Students:** Faculty members working with MREI for three or more year's duration are entitled for a scholarship while they enroll for their career enhancement and join the doctoral program. It is done to promote a culture of research in the organization and honour the association of employ with MREI.
- **Scholarship to MREI Students:** Students completing their School/UG/PG programs from MREI and enrolling MRU for further studies are also awarded scholarship. With an objective of promoting the trust in the parent organization.
- **Manav Rachna Student Staff Alumni Welfare Fund:** Since merit cum means scholarships are awarded to Haryana domicile holders with annual income less than 2.8 lac, a provision of relief through scholarships for other needy cases is there under MR Student Staff Alumni Welfare fund.

### Scholarship Data

| 2018-19  |                |                 |
|--|----------------|-----------------|
| Type of Scholarship  | No. of Student | Amount          |
| Tuition Fee Waiver   | 739            | 14265542        |
| Manav Rachna Student Staff Alumni Welfare Fund & Others      | 14             | 105000          |
| MREI Student   | 3              | 15000           |
| Concession to PhD Students on The Basis of Length of Service | 22             | 175000          |
|  | <b>778</b>     | <b>14560542</b> |

**Details of Scholarship under Different Categories**

| BAT<br>CH | MERIT<br>SCHOLARS<br>HIP |              | MERIT<br>CUM<br>MEANS |             | BRANCH<br>TOPPERS  |            | MGT<br>Approvals   |             | PHD<br>SCHOLARS    |            | MREI<br>STUDENT    |            | TOTAL              |         |
|-----------|--------------------------|--------------|-----------------------|-------------|--------------------|------------|--------------------|-------------|--------------------|------------|--------------------|------------|--------------------|---------|
|           | NO. OF                   | AMOUNT       | NO. OF                | AMOUNT      | NO. OF<br>STUDENTS | AMOUNT     | NO. OF<br>STUDENTS | AMOUNT      | NO. OF<br>STUDENTS | AMOUNT     | NO. OF<br>STUDENTS | AMOUNT     | NO. OF<br>STUDENTS | AMOUNT  |
| 2014      |                          |              |                       |             |                    |            | 1                  | 5240        |                    |            |                    |            | 1                  | 52400   |
| 2015      | 11                       | 747500       | 8                     | 2875<br>00  | 7                  | 1150<br>00 | 4                  | 2382<br>50  | 15                 | 21000<br>0 |                    |            | 45                 | 1598250 |
| 2016      | 61                       | 242550<br>0  | 9                     | 2695<br>00  | 8                  | 1570<br>00 | 7                  | 2415<br>00  | 9                  | 19000<br>0 |                    |            | 94                 | 3283500 |
| 2017      | 91                       | 335187<br>5  | 5                     | 3903<br>75  | 10                 | 1546<br>25 | 16                 | 5121<br>50  | 1                  | 15000      | 1                  | 500<br>0   | 4                  | 4429025 |
| 2018      | 84                       | 357387<br>5  | 6                     | 1120<br>000 |                    |            | 47                 | 3184<br>92  | 9                  | 80000      | 21                 | 105<br>000 | 7                  | 5197367 |
| TOT<br>AL | 24<br>7                  | 100987<br>50 | 5<br>8                | 2067<br>375 |                    | 4266<br>25 | 75                 | 1362<br>792 | 34                 | 49500<br>0 |                    | 110<br>000 | 46<br>1            |         |

## CHAPTER-3

# RESEARCH, DEVELOPMENT AND INNOVATIONS

### Research and Development

A University earns its ranking and reputation from the quality of research conducted by its faculty members, scholars and students. As researchers, we at Manav Rachna are seeking answers to questions of great interest to us. Our research problems are socially and politically relevant, scientific, technical and or interdisciplinary in nature. This knowledge created by research, invariably leads to innovations, new technologies, commercial products and development of startups/industries that have a significant impact on the country's economy.

University facilitates research through "Research Clusters" in different disciplines serving as the specialized groups to foster research culture across the university. Further 'Centres of Excellence' having collaboration with various industries help in conducting research and development work in the areas such as: Solar Energy Applications, Atmospheric and environmental sciences, Clean Water Technology, Green Chemistry, Corrosion Science, Communication Technology, Integrated System Design, Soft Computing, Business Process Modelling and Data Warehousing. Office of Dean Research promotes and facilitates research within various faculty of MRU by providing necessary support for designing and creating new products and conducting experiments and providing advance training to its faculty members in specialized fields. Through Research Integrated UG Program, students are involved in research activities at undergraduate level and are mentored by faculty members. This partnership between faculty and students culminates in the form of scientific paper or development of prototypes.

### 3.1 Research and Publications

Manav Rachna University is actively involved in research and publishes papers in National and International Journals of repute. A list of Publications of MRU (2018-19) in Journals and chapters published in various books are listed. A summary of publications along with highlights is given below:

**The Research and publication endeavors of the faculty during the year 2018-19 are summarized below:**

| <b>Research &amp; Innovation Credentials of Faculty Members</b> |   |                   |
|---|---|-------------------|
| <b>S.No.</b>  | <b>Category</b>   | <b>Total Nos.</b> |
| 1   | Research Publications (Databases like Scopus /WOS)        | 1100 (185)        |
| 2   | University h-index  | 18                |
| 3   | IPR Filed / Published / Granted (INDIA / USPTO)           | 27                |
| 4   | Startup Graduated / under incubation                      | 5                 |
| 5   | Startups got funding from NewGen IEDC                     | 4                 |
| 7   | AICTE-Smart India Hackathon-2019 Prize won under Hardware | 1                 |
| 8   | Other Competition Prizes won by the students              | 19                |



### 3.2 Major Research & Development Events Organized

Manav Rachna University encourages its teaching staff to engage in research activities and participate in conferences, advanced workshops and Faculty Development programs. Many of the faculty members participated in various events, presented papers in the conference, chaired the sessions and won medals and accolades. Brief highlights are shared in a table below:

| Publication details   | Numbers |
|---|---------|
| Books/ Book Chapter (Annexure 3.1)  | 14      |
| Journal & Conference Publications (Annexure 3.2)  | 102     |
| Patents (Annexure 3.3)  | 5       |
| External Consultancies (Annexure 3.4)   | 04      |
| Sponsored Research Projects (Annexure 3.5)  | 02      |
| Research Events such as Seminars/ Conferences/ Workshops Attended by faculty members (Annexure 3.6) | 99      |
| Research Events such as Seminars/ Conferences/ Workshops organised (Annexure 3.7)                   | 16      |
| Expert Talks Organized (Annexure 3.8)   | 52      |
| Expert Talks delivered by faculty members (Annexure 3.9)  | 16      |

### 3.3 Research Endeavors, Innovation and Incubation Centre, Centre of Excellence and Research Clusters:

MANAV RACHNA UNIVERSITY is committed to vision of our Founder Dr. O.P. Bhalla whose dream was to encourage research, innovation and entrepreneurship to help the students to develop professional entrepreneurial mindset and ability, to set up their own enterprises. Since inception, MRU have been striving to develop itself into institution of excellence in education and research in consonance with the contemporary and future needs of India through meaningful education, quality research and technological innovations for the industrial growth of the Country. In addition to offering formal Undergraduate and Post-graduate Programs, it actively encourages its faculty and students to undertake in-house and sponsored research and consultancy projects in order to strengthen the research profile of the Institutions. Presently MRU is actively engaged in research in several areas of Engineering, Manufacturing, Management, Basic and Applied Sciences and Energy, Environment and Law through research and Innovation Clusters and Centre of Excellence. These are providing technology driven support to the students, to help them in incubating business models as startups or spin offs to become student entrepreneurs for working towards Government of India policy of "Make in India", "Stand up India" and "Startup India".

### 3.3.1 Centre of Excellence

#### Altair Centre of Excellence

Altair Centre of Excellence is a joint venture of Manav Rachna University, Design Tech and Altair Engineering. The centre aims to carry out R & D work by providing a software and cloud solutions in the areas of product development, high performance computing (HPC) and data intelligence. Altair Engineering Inc. global technology company that provides product design and engineering solutions, enterprise services and cloud computing. The centre provides exposure to both faculty members and students of MRU campus on latest developments in the field of simulation and optimisation of product design and structural analysis. The Centre provides a lot of opportunities for students to carry out various projects and to flourish that, product design courses have been incorporated in the Undergraduate and Post Graduate curriculum of students. Center was launched on 27th May 2019 and a MoU was signed between Manav Rachna University, Altair and Designtech for training students and faculty in the area of product development.



#### Centre for Energy

The centre was established with an aim for carrying out R&D work and provides training in area of energy related instrumentation, control and optimization systems. The centre provides infield exposure to both faculty members and students at MRU campus on the latest developments in the field of solar energy, wind energy, chemical energy etc. Its applications especially commercial applications in the area of energy generation, storage and deployment. The centre brings a lot of opportunities for students to carry out projects and to flourish that, few experiments have been added in the curriculum of students. Details of activities organized during the year are given below:

| S.NO | Dates                      | Event details   | Target Audience                                     | Topic   |
|------|----------------------------|---|---|---|
| 1    | 1st July to 10th July 2018 | Summer training   | Bsc Maths 4 <sup>th</sup> sem students              | Energy harvesting through solar cells           |
| 2    | 25 <sup>th</sup> Sep 2018  | Workshop by Mr.V.Gupta – Electronic skill councils -India | First year BTech and Sciences Students              | PV Installation and related Issues              |
| 3    | 24 <sup>th</sup> Sep 2018  | Workshop(as a part of ESD course)                         | 3 <sup>rd</sup> sem CSE students                    | Solar energy as sustainable Energy              |
| 4    | 25 <sup>th</sup> Oct. 2018 | Workshop(as a part of Electronics workshop)               | 5 <sup>th</sup> BSc. physics                        | Design of solar charger                         |
| 5    | 20th March 2019            | Workshop(as a part of ESD course)                         | 3 <sup>rd</sup> sem ME and B.Sc (Phy/Chem.)students | Solar energy as sustainable Energy              |
| 6    | 7 <sup>th</sup> April 2019 | Lecture   | Govt school students of grade 7 & 8                 | Introduction to solar Energy and Dc Appliances. |

**Daikin Center of Excellence:** The 'Daikin Center of Excellence' was inaugurated on April 4, 2018, with the purpose to provide a platform to the students to enhance their skills and get access to world-class training in Air Conditioning. The Daikin Centre of Excellence provides hands-on practical exposure to the students and help them acquire the new technologies being practiced in the air-conditioning industry including the VRV technology, R-32 refrigerant and Inverter technology.

| Name of the Activities                | Date of Activities | Resource Person                                | Number of Participants | Objective of the Activity  |
|---------------------------------------|--------------------|--|------------------------|--|
| Introduction to Basics of HVAC System | 26/6/2018          | Mr. Piyush Mahendru                            | 30                     | To give the basic idea about the basic components and selection criteria of an HVAC System |
| Components of Air Conditioner         | 16/8/2018          | Mr. Pradeep Kumar Mouria & Mr. Gianender Kajal | 15                     | To explain the working principle and components of different types of an Air Conditioner   |
| Introduction to VRV System            | 28/9/2018          | Mr. Piyush Mahendru                            | 10                     | To give the idea about the latest technology of an air conditioner which is VRV.           |
| Heat Load Calculation using MS Excel  | 4/10/2018          | Mr. Piyush Mahendru                            | 50                     | To calculate the heat load calculation for a room  |

### 3.3.2 Research & Innovation Clusters (RICs)

Research and Innovation Clusters provide technology and innovation support whereas Incubation helps the students to develop practical business models as startups or spin offs to become student entrepreneurs for working towards Government of India policy of “Make in India”.

The Innovation and Incubation Centre has three Research & Innovation Clusters (RICs), three Centres of Excellence (CEs), one IPR Cell and one Business Incubator (BI) which is supported by nine departments of the University. These units are actively engaged in research projects by adopting interdisciplinary approach in addition to other activities like Competitions & Projects, Publishing, Sponsored R&D projects, Training in Advanced Areas or future technologies, Product Development, Collaboration & Consultancy etc.

To facilitate the quality research, research clusters in the area of Material Science, Environmental, Atmospheric, Mechanical and Computer Science have been established. These are the close research groups who are active in research fields of common interest and also associate interested students to work on various problems.

#### Research Computing Cluster (RCC)

Computing cluster has been established in 2017 to usher and nurture dedicated student and faculty teams into research and innovation for fundamental problems in computing science and inter- disciplinary areas with projects and publications that have quality, impact and value to the growth of technology and human society. The following projects are undergoing in the cluster:

| S.No. | Area             | Project Title                | Brief Summary of Project  |
|-------|------------------|------------------------------|---|
| 1     | React Native     | APP development (Rental App) | Through this people can rent place to live for a particular amount of time. |
| 2     | IoT              | Smart helper                 | A device which can help during a natural disaster                           |
| 3     | Cyber Security   | Horus                        | Extending Previous Project  |
| 4     | Game Development | Terrible Tetris / Tetris War | New Concept Casual Game   |

## Material & Environment Sciences (MES) Cluster

Material & Environment Sciences (MES) Cluster is to be a Centre for knowledge generation through research in the frontier areas of new, economical and environmentally safe materials. The cluster will establish itself at National and International level, and will publish the research work relevant for societal needs and sustainable development.



### 3.4 IPR Cell

Intellectual property (IP) encompasses the expression of ideas, information and knowledge. IP includes scientific inventions but also music, literary and other artistic works, trademarks and trade symbols, Geographical indications and integrated circuit layouts. Intellectual Property Rights (IPR) confer exclusive right over the intellectual property created. The purpose of IPRs is encourage innovation and development. Academic and Research Institutions not only contribute to the creation of IP but also help the researchers, creators and inventors to protect their IP rights. Manav Rachna I.P.R. Cell is governed by the University Intellectual Property Rights Policy.

IP Cell conducted various workshops to create awareness regarding IP rights amongst students and faculties. IPR Team, organized few workshops for various set of audience. The workshops were conducted on 30th March, 9th April, 26th April and 31st May, 2019. The purpose of workshops was to enhance the awareness regarding IP laws.

Manav Rachna University faculty has 15 patents to its credit and has recently applied for two more patents. IPR cell has been established to create awareness on patents.



### 3.5 Manav Rachna Business Incubator (MRBI)

Manav Rachna Business Incubator is an initiative towards nurturing the innovative instinct of the students, alumni and faculty of MRU. With an objective to cater to the needs of students and faculty members who are inclined towards research, innovation, novel ideas and to encourage research and entrepreneurship, MRBI is equipped with all types of design, fabrication, manufacturing facilities to facilitate the growth and success of startup and early stage companies. We at MRBI, also provide a good path to capital from angel investors, state governments, economic-development coalitions and other investors. At MRBI, business not only gets access to a potential buffet of capital choices, but also a host of intangible benefits including mentorship, expertise and networking. MRBI offers integrated, customized Innovation-Based Incubation support services. It scouts for ideation for development of business concepts and works for inculcating skills and competencies through capacity building/ training programs for evolving enterprises. Regulatory, financial and administrative help form part of the services, and networking opportunities with potential investors, practitioners and collaborators are endless. ManavRachna Business Incubator (MRBI) is nurturing and overseeing innovation and entrepreneurship at ManavRachna Campus. With a rich tradition of incubation through bodies such as the 'NewGen Innovation' and 'Entrepreneurship Development Centre' MRBI has pioneered innovation among its young members of undergraduate student community.

#### **TechnoPlanet Lab Pvt. Ltd.**

Technoplanet is a company working in education space to develop new age tools, technologies and programs to create engaging K-12 learning experiences with an ultimate objective to revolutionizing education. In 21st century, technological advancements are rapidly disrupting industries with new trends evolving like self-driving cars; digital shopping; virtual worlds; life on mars. Envisioning how these disruptions will play out in our children's lives opens up a whole lot of new questions, and necessitates paradigm shifts in how we are thinking about education today. They also offer equipments and solutions to setup the Atal Tinkering Labs as envisioned by NITI Aayog. [www.http://technoplanetlab.com](http://technoplanetlab.com)

#### **Startups supported @ New Gen IEDC, Manav Rachna**

MREI has been granted financial support of Rs. 2.87 Crores from DST-NESTEDB, Govt. of India for setting up of a Manav Rachna New Generation Innovation and Entrepreneurship Development Centre (MRNewGen-IEDC) in the campus to nurture student- entrepreneurial ventures. It's physical working space is more than 5000 sq. feet area with latest amenities including internet, Wi-Fi, conference rooms, multimedia projector, pantry, and recreational area. Each startup is supposed to receive funding of Rs. 2.5 Lakhs for the developmental work along with recurring grant. Total 85 startups are proposed to be incubated in next five years times. Some of the startup received funding during the last year include:

- **Thap Krida:** The team started in January 2018 have developed 3 games and published them on google playstore and apple appstore.
- **Vagabond Brains:** Vagabond Brains offers a solution to companies to stand out of the crowd through digital marketing services. Vagabond brains incorporate all the digital marketing techniques such as SEO, SEM, content management to help the company experience the

tactics of online business in terms of more visibility on the net and footfall.

- **Greenity:** The startup's product 'Smart Chair' is an innovative step towards generation of electricity from non-polluting sources rather than from conventional sources of energy.
- **Coating Vala Solutions:** The team developed an extremely affordable surface protector machine for coating of floors and important equipment to protect them from dust and paints.
- **Ferrox Technologies:** An innovative ideology that aims at revolutionizing commercial and agricultural EV marketplace with development in EAUV [electric agricultural utility vehicle] and battery pack development for high voltage drivetrains.
- **Travel Gram:** A mobile application based community built for travelers and explorers to connect, share and explore co-travelers. Application would be available for android and apple users.
- **Smart Water Sprinkler:** An automatic water sprinkler to make watering and maintaining plants/ gardens easier for domestic and commercial places.
- **Car Simulator:** The team is developing economical DIY kits of a car simulator for enabling kids to understand how a car is driven while enjoying their play time.

### 3.6 Innovations and Competitions Won

Research and development (R&D) activities fuel innovations which help scientists and researchers to develop new knowledge, techniques, and technologies. This results in increased productivity. Growth in productivity leads to growth in the economy. With this guiding philosophy Manav Rachna University encourages its faculty and students to invest in innovative projects. Students have won some of the competitions during last one year include:

- SMART INDIA HACKATHON 2019 – Team XCODERS of B Tech. Computer Science & Engineering, is the proud winner of SMART INDIA HACKATHON 2019 under Software Category. They represented MRU on problem statement of MSME at LPU nodal Centre, during the Grand Finale of third edition (Software) of Smart India Hackathon-2019, held on March 2 and March 3, 2019.
- “TECHNOVATION” – MRU Students have been the winners of many Hackathons organized by various Institutions like: “TECHNOVATION”, on theme Security & Surveillance, Vihaan 2.0, 24 hrs Hackathon organized by IEEE Delhi Technical University.
- Ashish Verma 3<sup>rd</sup> year Selected as the Lead of Developer Student Club and won cash prize of of Worth Rs 10,000/- along with Internship offer from PAYTM and Online Cloud Credentials of Worth \$1,000. Developer Student Clubs (DSC) is a Google Developers program Lead of Developer



Student Club, held on 20<sup>th</sup> Feb 2019 organized by Developer Student Clubs (DSC)

- Five teams from Computer Science and Technology department, participated in Makeathon 2019 on organized by Manav Rachna Innovation & Incubation Center in association with Texas Instruments and won many prizes in different categories.
- Apart from the above highlighted events, many other students participated in lots of competitions and brought laurels to the University. The list is given in the Annexure 3B.

### **Student Participation in Conferences**

- Ms. Diksha Jasrotia, student of M.Sc. Mathematics presented a research paper entitled Literature Review on different techniques for better feasible solution of Transportation Problem at the 1st International Conference on Computer Algebra: Applications in Engineering organised by Anand International College of Engineering, Jaipur, (Supported by CIMPA, France) from March 5 - 7, 2019.
- Ms. Nikita Gulati, student of M.Sc. Mathematics presented a research paper entitled Literature Review of Transportation Problems at the International Conference on Machine Learning, Big Data, Cloud And Parallel Computing, Trends, Perspectives & Prospects organised by MRIIRS, Faridabad, Haryana, India from February 14 - 15, 2019.
- Ms. Komal, student of M.Sc. Mathematics presented a research paper entitled Literature Survey on Single and Multi-Objective Transportation Problems at the International Conference SUSCOM - 2019 organised by Amity University, Rajasthan, Jaipur, India from February 26 - 28, 2019.
- Gurpreet and Ravi Dutt, students of ME Department, 8-Semester, attended the International Conference on New Frontiers in Engineering, Science and Technology (NFEST-2019) on 18 Feb 2019. They presented paper on "Design, Analysis and Manufacturing of Front Sprocket from Carbon Fiber Reinforced Plastics for a bicycle".

### **3.7 Research Integrated UG program**

Manav Rachna University has partnered from July 2016 with Accendere, a Career Launcher Educate group for establishing Industry Academia Research Collaboration whereby we enable our undergraduate

students to participate in research and innovation projects, producing research publications in high impact factor journals along with patent filings and start-ups with regular mentoring from the science, engineering and management communicators. Under this partnership students undergo mandatory training in research field which is spread over a period of 4 semesters and starts with introducing the students to what research and development means and culminates into writing of an original scientific paper or development of a prototype.

For the last one and half year's students have been involved in scientific research in the form of case studies, reviewing current research topics, experiments, real time implications etc. Their domain target ranges from communication to construction, portraying their extreme skills and interest. This kind of research involvement provides students hands on experience and knowledge in addition to their regular course work. All undergraduate students are given access to research enhancer tools viz. Research Index, Deep dyve platform etc. Students in their second-year start research activity which continues up to thid year. Already the program has been initiated in three batches of engineering registered 2015 onwards and the outcome of the activity is student publishing in journals and their participation in conferences.

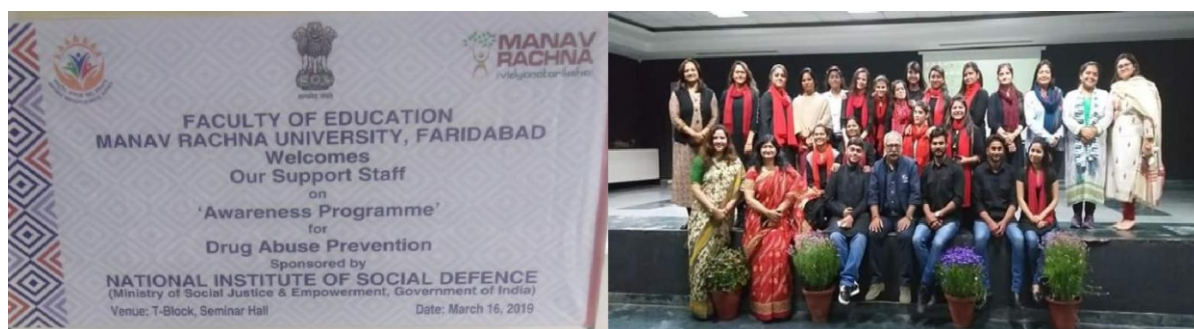
## CHAPTER-4

### ACHIEVEMENTS OF MRU FACULTY

The faculty members of Manav Rachna keep themselves updated in consonance with emerging trends in education and latest thrust areas in research by involving in various academic activities. Following details throw light on their remarkable achievements, participation along with their endeavors in different associated fields. Their contribution is commendable in empowering learned society either by becoming member of committees, invited speaker, reviewer /editor of research journal or external examiner etc., Several Faculty members are given special recognition and awarded for their exemplary work during session 2018-19. Listed below are some of their participations, awards and recognitions:

#### Faculty Achievements

1. Dr Babita Parashar, Dean-Faculty of Education and Humanities received a sanction grant of Rs 2.5 Lakhs from Ministry of Social Justice and Empowerment, GOI for Drug Abuse Awareness and Prevention. Eight events were organised in all benefitting 1200 students and community at Village Ankhir and Anangpur.



Dr Babita Parashar also qualified Foundation Course in Special Education. She is a RCI certified Rehabilitation Professional. She developed a MOOC on "Being Inclusive by Action" under Open Education for Better World (OE4BW) undertaken by UNESCO Sloveni. She also chaired a Technical session at MHRD sponsored International Conference hosted by GGSIPU, New Delhi

2. Ms. Manpreet Kaur has been elected as Chair, Women in Engineering Affinity Group, 2019, IEEE Delhi Section. She has been Guest Editor for Special Issue ""Research challenges and Issues in Big Data and Analytics"" in Web of Science journal IJIRR (IGI Global). She has received certificate of Appreciation from NPTEL, MHRD India for the Active status of MRU NPTEL Local Chapter, July-December 2018 & Certificate of Appreciation for the "A" ranking assigned to MRU NPTEL Local Chapter in Jan- April 2019.
3. Ms. K Deepa & Dr. Deepa Arora bagged 1st prize in 3rd Manav Rachna Corporate Badminton Championship in women's doubles category organized by Manav Rachna Sports Academy at MRIS Sector 14 in December 2018. She has been "Runner up of 9th Manav Rachna Inter Faculty & Staff Badminton Championship in women singles category organized by Manav Rachna Sports Academy at MRIS sector 14 from 26th - 28th June 2019."
4. Mr. Joginder received best paper Award in National Conference in YMCA University.

5. Mrs. Rinki Yadav one of the top 5 National rankers of NPTEL Short term Course in 2019.
6. Mr. J.P. Sharma, Mr. Bhanu Pratap, Mr. Ankur Aggarwal, Ms. Ridhi Khanna and Dr. Pooja Kapoor received "Employee of the Year" in 2018-19. Mr. Gianender Kajal received "Appreciation Award" for students Placement activity in 2018.
7. Dr. Aparna Vyas published a book entitled "Non-MSF Wavelets" with LAP Lambert Academy Publishing, Germany, DOI: 978-620-0-10318-5, 2019(June 2019).
8. Dr. Dinesh Tripathi has been member of Editorial Board of "Pure and Applied Mathematics Journal", NY, USA.
9. Dr. Hardeo Kumar Thakur has been Guest Editor for Special Issue "Research challenges and Issues in Big Data and Analytics" in Web of Science journal IJIRR (IGI Global).
10. Mr. Ram Chatterjee is recognized as BRONZE partner faculty under "Infosys - The Campus Connect Faculty Partnership Model-2018".
11. Dr.Rashi Banerji has been awarded Doctoral Degree by Jamia Millia Islamia in May 2019.
12. Dr Seema Sharma Faculty Development Programme conducted by Digital School of Delhi on "Digital Tools in Teaching &Research" from 2nd -7th January 2019 at MRIIRS
13. Dr Seema Sharma presented a paper on "Ethics, Human Values and Education" in an International Conference on "Ethics and Human Values:The Global Challenges" at Jaipur National University on 18-20th April,2019. She has completed NPTEL on line 8 weeks certificate course in October 2018 on Soft Skill and personality development with elite certification. She took part in the project Open Education for Better World (OE4BW) undertaken by UNESCO Slovenia in collaboration with University Nova Gorica to present the results of developed OER participated in the final event held in Lanthieri Mansion, Vipava, Slovenia from 1st to 4th July,2019"
14. Ridhi Khanna qualified NET in Education, 2018. She also attended three days National Workshop under PMMMNMIT Scheme in Wardha. She was invited as a resource person for the LIVE Personal Contact Radio Programme for D.El.Ed, NIOS.
15. Shreyasi Das attended Three week National Workshop on Development of Open Education Resources in Higher Education in blended mode at SNTD Women's University, Mumbai, under (PMMMNMTT), MHRD, India and completed with A+ Grade. She attended One week online National Workshop on Theoretical Framework of MOOC organised by SNTD, Mumbai under (PMMMNMTT), MHRD, India.
16. Fifteen faculty members successfully completed 27 MOOC courses. 2 Faculty members are in Top 5 all over India.

| Faculty Name | Course 1                           | Course 2                   | Course 3                |
|--------------|------------------------------------|----------------------------|-------------------------|
| Mr.Ankur     | Introduction to Internet of Things | Database Management System | Introduction to Routers |

|                      |   |  |   |
|----------------------|---|--|---|
| Ms.Manpreet Kaur     | Machine Learning                            | Joy of computing using Python          |   |
| Dr.Ram Chatterjee    | Privacy and Security in Online Social Media |  |   |
| Ms.Shailja Sharma    | Designer Learning                           | Introduction to Automata               |   |
| Ms. Nitika Munjal    | Digital Circuits                            |  |   |
| Ms. Niharika Thakur  | Electronic Waste Management                 |  |   |
| Ms. K Deepa          | Neural Networks and Fuzzy logic             |  |   |
| Mr. Vijay Kumar Gill | Fundamentals of Semiconductor Devices       |  |   |
| Dr. Charu Pathak     | Digital Circuits                            |  |   |
| Mr. Lokesh Bhardwaj  | Principles of Communication Systems-I       | Modern Digital communication Technique |   |
| Mr. Bhanu Pratap     | Principles of Communication Systems-I       | CMOS VLSI Digital Design               | Modern Digital Communication Techniques                       |
| Gunjan Chandwani     | Joy of computing using python               | Data Analysis & Decision Making-I      |   |
| Dr. Sachin Lakra     | Software Engineering                        |  |   |
| Ms. Riya Sapra       | Designer Learning                           | Introduction to Automata               | Language and Computation & Blockchain Architecture and design |
| Ms.Gaganjot Kaur     | Database Management System                  | Cloud Computing                        | Introduction to Internet of Things                            |

## CHAPTER-5

### TRAINING & PLACEMENTS

#### 5.1 Summer Trainings/Internships

Summer Training/Internship plays an important role since they offer various ways to enhance skills in a specific job skill. During internship in a new workplace, students gain **first-hand knowledge** about how a professional environment works. Students learn to enhance the **communication skills, soft skills** and approach to create cordial relationships with other employees. **Time management, managing the workload and allocate the work** are another important skill that student learns as an intern. It is also necessary for anyone entering a new career to build the **specific job skills** required by their desired role.

The lists of Industries where students have completed their internships are mentioned below:

| INTERNSHIP |                       |                 |               |             |                                  |          |                 |
|------------|-----------------------|-----------------|---------------|-------------|----------------------------------|----------|-----------------|
| Sl. No.    | Deptt.                | Student Name    | Roll No.      | Contact No. | Company (Name)                   | Duration | Package(if any) |
| 1          | <b>B.TECH-<br/>ME</b> | Avneet Singh    | 2K15MEUN01003 | 9582743337  | Tata Steel                       | 6 Months | NIL             |
| 2          |                       | Deepanshu Kalra | 2K15MEUN01005 | 8368756276  | Star Wire                        | 4 Months | NIL             |
| 3          |                       | Dheeraj         | 2K15MEUN01006 | 8800862072  | Gulati Auto Electricals Pvt. Ltd | 6 Months | NIL             |
| 4          |                       | Gautam Ahuja    | 2K15MEUN01008 | 9650165303  | Stryker                          | 6 Months | NIL             |
| 5          |                       | Gurpreet singh  | 2K15MEUN01009 | 9910854884  | Uno Minda                        | 6 Months | 2.4 Lac/Annum   |
| 6          |                       | Himanshu Garg   | 2K15MEUN01011 | 8010119300  | Stryker                          | 6 Months | NIL             |
| 7          |                       | Himanshu Gulati | 2K15MEUN01012 | 9582691616  | Tomita India Pvt Ltd             | 6 Months | NIL             |
| 8          |                       | Himanshu Gupta  | 2K15MEUN01013 | 8059188877  | Star Wire                        | 4 Months | NIL             |
| 9          |                       | K. Aditya       | 2K15MEUN01014 | 8130336933  | Gulati Auto Electricals Pvt. Ltd | 6 Months | NIL             |
| 10         |                       | Karan Sehgal    | 2K15MEUN01015 | 8800463890  | Gulati Auto Electricals Pvt. Ltd | 6 Months | NIL             |
| 11         |                       | Kunal Singh     | 2K15MEUN01016 | 9717309891  | Gulati Auto Electricals Pvt.     | 6 Months | NIL             |

|    |                        |                     |               |             |  |          |       |
|----|------------------------|---------------------|---------------|-------------|--|----------|-------|
|    |                        |                     |               |             | Ltd  |          |       |
| 12 |                        | Manjeet Singh       | 2K15MEUN01017 | 8930241145  | Star Wire                                    | 4 Months | NIL   |
| 13 |                        | Motiur Rahman       | 2K15MEUN01020 | 9643859964  | Gulati Auto Electricals Pvt. Ltd             | 6 Months | NIL   |
| 14 |                        | Mukul Chaudhary     | 2K15MEUN01021 | 8130777008  | Star Wire                                    | 4 Months | NIL   |
| 15 |                        | Nazim Hussain       | 2K15MEUN01022 | 9017432143  | Star Wire                                    | 4 Months | NIL   |
| 16 |                        | Nitin Jaiswal       | 2K15MEUN01023 | 9818816565  | Honda  | 6 Months | NIL   |
| 17 |                        | Pushpinder Singh    | 2K15MEUN01024 | 9911372968  | Indigo                                       | 6 Months | NIL   |
| 18 |                        | Rahul Malik         | 2K15MEUN01025 | 9991428776  | Star Wire                                    | 4 Months | NIL   |
| 19 |                        | Rahul Lamba         | 2K15MEUN01026 | 7015134192  | Poly Medicare                                | 6 Months | NIL   |
| 20 |                        | Rajeev Ranjan Singh | 2K15MEUN01027 | 8285070318  | Gulati Auto Electricals Pvt. Ltd             | 6 Months | NIL   |
| 21 |                        | Shivam Bansal       | 2K15MEUN01028 | 8800710735  | Tata Steel                                   | 6 Months | NIL   |
| 22 |                        | Shivam Mahajan      | 2K15MEUN01029 | 9899586606  | Stryker                                      | 6 Months | NIL   |
| 23 |                        | Surya Pratap Singh  | 2K15MEUN01031 | 9999431933  | Capitalvia Global Research Ltd               | 6 Months | NIL   |
| 24 |                        | Tushar Kumar        | 2K15MEUN01032 | 7011218903  | Sae Project                                  | 6 Months | NIL   |
| 25 |                        | Ravi Dutt Sharma    | 2K16MEUL01001 | 9643950206  | Star Wire                                    | 4 Months | NIL   |
| 26 | <b>B.TECH-<br/>CSE</b> | Aaditya Gupta       | 2K15CSUN01001 | 9999007757  | Inficold India Pvt Ltd                       | 6 Months | 15000 |
| 27 |                        | Aditi Gupta         | 2K15CSUN01002 | 9650310934  | UniConverge Technologies                     | 6 Months | 0     |
| 28 |                        | Aditya Rana         | 2K15CSUN01003 | 9810559812  | RJ Corp                                      | 6 Months | 0     |
| 29 |                        | Aman Bhardwaj       | 2K15CSUN01004 | 9.19959E+11 | Cvent  | 6 Months | 34000 |
| 30 |                        | Ankit Dahiya        | 2K15CSUN01005 | 9999354116  | Spade Infotech                               | 6 Months | 8000  |
| 31 |                        | Apurva Sehgal       | 2K15CSUN01006 | 8800856719  | Splash Business Intelligence Private Limited | 6 Months | 16000 |
| 32 |                        | Avnish Khatri       | 2K15CSUN01007 | 8587846866  | Jaro Education                               | 6 Months | 32000 |
| 33 |                        | Cherry Singh        | 2K15CSUN01008 | 9582007383  | TCS  | 6 Months | 0     |

|    |                        |                   |               |            |                                  |          |       |
|----|------------------------|-------------------|---------------|------------|----------------------------------|----------|-------|
| 34 |                        | Gazal Choudhary   | 2K15CSUN01010 | 9711682132 | NIIT Technologies                | 6 Months | 15000 |
| 35 |                        | Himani Gupta      | 2K15CSUN01011 | 8587807423 | NIIT Technologies                | 6 Months | 12000 |
| 36 |                        | Himanshu Bansal   | 2k15CSUN01012 | 8950036350 | Unico Technology Pvt. Ltd        | 6 Months | 0     |
| 37 |                        | Kanika            | 2K15CSUN01013 | 9716019113 | ERNET                            | 6 Months | 0     |
| 38 |                        | Kartik Sibal      | 2K15CSUN01014 | 7503756876 | Elektromart                      | 6 Months | 0     |
| 39 |                        | Lakshaya Bhardwaj | 2K15CSUN01015 | 9599047269 | Sanden Vikas (india) Pvt. Ltd    | 6 Months | 0     |
| 40 |                        | Mayank Bagchi     | 2K15CSUN01016 | 8587979644 | Fox My Box OPC Pvt. Ltd.         | 6 Months | 8000  |
| 41 |                        | Muskaan Gupta     | 2k15CSUN01017 | 9910144070 | TCS                              | 6 Months | 0     |
| 42 |                        | Prachi Arya       | 2K15CSUN01019 | 9205628292 | Concret                          | 6 Months | 8000  |
| 43 |                        | Pranjul Singla    | 2K15CSUN01020 | 9958778518 | Enquest Petro Solutions          | 6 Months | 0     |
| 44 |                        | Prithvi Singh     | 2K15CSUN01021 | 9810548792 | Naxap                            | 6 Months | 0     |
| 45 |                        | Rohan Sharma      | 2K15CSUN01023 | 9873836104 | EMT Global India Private Limited | 6 Months | 0     |
| 46 |                        | Rohan Tripathi    | 2K15CSUN01024 | 7503503897 | Enquest Petro Solutions          | 6 Months | 0     |
| 47 |                        | Salonika Chauhan  | 2K15CSUN01025 | 9654850257 | Cybage                           | 6 Months | 0     |
| 48 |                        | Saurav Kumar      | 2K15CSUN01026 | 9122698048 | Technomatics Solutions Pvt Ltd   | 6 Months | 0     |
| 49 |                        | Shreya Mittal     | 2K15CSUN01027 | 9871762338 | ListIndia                        | 6 Months | 10000 |
| 50 |                        | Simran Sachdeva   | 2K15CSUN01028 | 7011104708 | NIIT                             | 6 Months | 15000 |
| 51 |                        | Varnica Kapoor    | 2K15CSUN01030 | 9582063765 | NIIT Technologies Limited        | 6 Months | 15000 |
| 52 |                        | Vijay Kumar       | 2K15CSUN01031 | 8826728508 | Express Earth                    | 6 Months | 10000 |
| 53 |                        | Yashesh Dagar     | 2k15CSUN01032 | 9810330073 | Car Eager Express                | 6 Months | 5000  |
| 54 |                        | Abhinav Sethi     | 2K17CSUN01033 | 8800380168 | Cxc Infotevh                     | 6 Months | 15000 |
| 55 | <b>B.TECH-<br/>CSE</b> | Aditya Nandwani   | 2K15CSUN01034 | 7290017871 | Appcode india                    | 6 Months | 0     |
| 56 |                        | Akshita Agarwal   | 2K15CSUN01036 | 8800449856 | Nirwani steels                   | 6 Months | 0     |
| 57 |                        | Anchal Garg       | 2K15CSUN01037 | 9671909459 | Desire Web Technologies Pvt      | 6 Months | 0     |



|    |                    |               |             |                           |          |       |  |
|----|--------------------|---------------|-------------|---------------------------|----------|-------|--|
|    |                    |               |             |                           | Ltd      |       |  |
| 58 | Anupama Chauhan    | 2K15CSUN01038 | 7838434382  | To The New                | 6 Months | 15100 |  |
| 59 | Arpita Goel        | 2K15CSUN01039 | 8920346287  | NIIT Technologies Limited | 6 Months | 15000 |  |
| 60 | Arquish Ali Ansari | 2K15CSUN01040 | 9716040903  | HCL Technologies          | 6 Months | 0     |  |
| 61 | Ayush Sharma       | 2K15CSUN01041 | 9953736105  | NODWIN Gaming             | 6 Months | 0     |  |
| 62 | Chirag Munjal      | 2K15CSUN01042 | 8744070241  | All Friends Studio        | 6 Months | 12000 |  |
| 63 | Hari Mohan Sharma  | 2K15CSUN01043 | 8920743360  | iAvatarZ Digital          | 6 Months | 0     |  |
| 64 | Himanshu Miglani   | 2K15CSUN01044 | 8285020820  | Real Time Data Services   | 6 Months | 10000 |  |
| 65 | Ishaan Arya        | 2K15CSUN01045 | 8178880967  | MFI Office Solutions      | 6 Months | 0     |  |
| 66 | Mahima             | 2K15CSUN01046 | 9810548664  | TechChefz                 | 6 Months | 0     |  |
| 67 | Mehak Dhunna       | 2k15CSUN01047 | 9971897288  | Rk Industries             | 6 Months | 0     |  |
| 68 | Nilansh Dewan      | 2K15CSUN01048 | 9873019000  | Rite Infotech Pvt Ltd     | 6 Months | 0     |  |
| 69 | Piyush Bajpai      | 2K15CSUN01049 | 9540806512  | ProHLP Solutions Pvt. Ltd | 6 Months | 20000 |  |
| 70 | Priya              | 2K15CSUN01050 | 9717426823  | Sai Computers Limited     | 6 Months | 0     |  |
| 71 | Ramandeep Singh    | 2K15CSUN01051 | 8373932509  | AppRoarr                  | 6 Months | 10000 |  |
| 72 | Riya Chauhan       | 2K15CSUN01052 | 9069958886  | All Friends Studio        | 6 Months | 12000 |  |
| 73 | Riya Nagpal        | 2K15CSUN01053 | 9871353454  | List                      | 6 Months | 10000 |  |
| 74 | Sachin Gwasikoti   | 2K15CSUN01054 | 9.17012E+11 | Data Peace                | 6 Months | 0     |  |
| 75 | Sahil Sansanwal    | 2K15CSUN01055 | 9999121155  | Rennixiq Infotech PvtLtd  | 6 Months | 0     |  |
| 76 | Sanya Singh        | 2K15CSUN01056 | 7838541450  | NIIT Technologies         | 6 Months | 15000 |  |
| 77 | Shivangi Aggarwal  | 2K15CSUN01057 | 8285305009  | Sai Computers Limited     | 6 Months | 0     |  |
| 78 | Shreya Khandelwal  | 2K15CSUN01058 | 9811625957  | Samsung R&D               | 6 Months | 35000 |  |
| 79 | Shubham Sharma     | 2K15CSUN01059 | 8800537975  | TCS                       | 6 Months | 0     |  |
| 80 | Smridhi Chawla     | 2K15CSUN01060 | 7838201246  | NIIT Technologies         | 6 Months | 15000 |  |

|     |                        |                      |               |                          |                                 |          |       |
|-----|------------------------|----------------------|---------------|--------------------------|---------------------------------|----------|-------|
| 81  |                        | Vaibhav Kashyap      | 2K15CSUN01061 | 8130840024               | Softline Services India Pvt Ltd | 6 Months | 0     |
| 82  |                        | Varnita Jain         | 2K15CSUN01062 | 8587828301               | Accolite                        | 6 Months | 20000 |
| 83  |                        | Vinayak Kumar        | 2K15CSUN01063 | 9953290944               | Manch                           | 6 Months | 0     |
| 84  | <b>B.TECH-<br/>CSE</b> | Abhinav Sharma       | 2K15CSUN01064 | 9911513167               | NIIT Technologies               | 6 Months | 15000 |
| 85  |                        | Aditya Narayan       | 2K15CSUN01065 | 9871500790               | Hion Jobs                       | 6 Months | 0     |
| 86  |                        | Aditya Sharma        | 2k15CSUN01066 | 8826920960               | Wipro Ltd.                      | 6 months | 15000 |
| 87  |                        | Amit Upreti          | 2K15CSUN01067 | 9650941537               | Vishwa Informatics              | 6 Months | 15000 |
| 88  |                        | Anjali               | 2K15CSUN01068 | 9810580340               | Tecnacea                        | 6 Months | 5000  |
| 89  |                        | Anurag Setia         | 2K15CSUN01069 | 9555315871               | Divya Engineering               | 6 Months | 0     |
| 90  |                        | Ashu                 | 2K15CSUN01070 | 7082136519               | SIAC- SKH India Pvt Ltd         | 6 Months | 0     |
| 91  |                        | Chaitanya Singh Rana | 2K15CSUN01071 | 9953884053               | Jaro Education                  | 6 Months | 32000 |
| 92  |                        | Cheshta Bansal       | 2K15CSUN01072 | 9650734149               | GMT Industries Ltd.             | 6 Months | 0     |
| 93  |                        | Davinder Kaur        | 2K15CSUN01073 | 9711420233               | Virus Positive                  | 6 Months | 0     |
| 94  |                        | Dushyant Kundu       | 2K15CSUN01074 | 9560801751               | Sapling Services                | 6 Months | 0     |
| 95  |                        | Himanshu Arora       | 2K15CSUN01076 | 9811219562               | Flake Media                     | 6 Months | 0     |
| 96  |                        | Kapil Garg           | 2K15CSUN01077 | 9650004723               | K.K Trading Company             | 6 Months | 0     |
| 97  |                        | Karan Gupta          | 2K15CSUN01078 | 9811502325               | SK Trading                      | 6 Months | 0     |
| 98  |                        | Karan Kaushik        | 2K15CSUN01079 | 8860995545               | BSES rajdhani power ltd         | 6 Months | 0     |
| 99  |                        | Manisha Kumari       | 2K15CSUN01080 | 8750592675               | MNJ Software Pvt. Ltd.          | 6 Months | 7000  |
| 100 |                        | Mohit Chawla         | 2K15CSUN01081 | #ERROR!                  | Star Project India              | 6 Months | 0     |
| 101 | Piyush Singh           | 2K15CSUN01084        | 9818666457    | JBM                      | 6 Months                        | 0        |       |
| 102 | Pratham Sharma         | 2K15CSUN01085        | 7999999265    | MFI Office Solutions Ltd | 6 Months                        | 30000    |       |
| 103 | Prince Saini           | 2K15CSUN01086        | 9555200029    | Divya Engineering        | 6 Months                        | 0        |       |
| 104 | Rahul Badal            | 2K15CSUN01087        | 8700342885    | Vinove                   | 6 Months                        | 10000    |       |
| 105 | Rishabh Matharoo       | 2k15CSUN01088        | 8744866067    | Prohlp Solutions Pvt ltd | 6 Months                        | 20000    |       |

|     |                        |                   |               |            |                                    |          |         |
|-----|------------------------|-------------------|---------------|------------|------------------------------------|----------|---------|
| 106 |                        | Riya Choudhary    | 2K15CSUN01089 | 9818799919 | List India                         | 6 Months | 10000   |
| 107 |                        | Robin Rao         | 2K15CSUN01090 | 7011588954 | Vishwa Informatics                 | 6 Months | 0       |
| 108 |                        | Sahil Sharma      | 2K15CSUN01091 | 8766395564 | Vishwa Informatics                 | 6 Months | 0       |
| 109 |                        | Saurabh Arora     | 2K15CSUN01092 | 9999954117 | Virus Positive                     | 6 Months | 0       |
| 110 |                        | saurabh singh     | 2K15CSUN01093 | 9911051189 | Vagabond Brains                    | 6 Months | 0       |
| 111 |                        | Shraddha Bhatia   | 2K15CSUN01094 | 9643732462 | Cubical Labs                       | 6 Months | 17000   |
| 112 |                        | Shubham Gupta     | 2K15CSUN01095 | 9811373055 | Axtrum Solutions Pvt Ltd           | 6 Months | 0       |
| 113 | <b>B.Tech-<br/>CSE</b> | Utkarsh Kaushik   | 2K15CSUN01096 | 8447618426 | TCS                                | 6 Months | 0       |
| 114 |                        | Vaibhav Sachdeva  | 2K15CSUN01097 | 9999224681 | Wipro Ltd.                         | 6 Months | 15000   |
| 115 |                        | Vidya Raj         | 2K15CSUN01098 | 9643476289 | Vagabond Brains                    | 6 Months | 0       |
| 116 |                        | Yash Bhardwaj     | 2K15CSUN01099 | 7827270889 | TDS                                | 6 Months | 19000   |
| 117 |                        | Neetika Raina     | 2K15CSUN02003 | 9953191298 | M & M Machine Craft Pvt. Ltd.      | 6 Months | 0       |
| 118 |                        | Samarth Sethi     | 2K17CSUM01003 | 9145108988 | Sopra Steria India                 | 6 Months | 0       |
| 119 | <b>DMC</b>             | Manoj Joshi       | 2K17MCUN02035 | 9871939844 | Usha Rectifiers Pvt Ltd            | 6 Weeks  | 0       |
| 120 |                        | Mohd Anas         | 2k17MCUN02038 | 7503776061 | usha Rectifiers Pvt Ltd            | 6 Weeks  | 0       |
| 121 |                        | Shivani Thakran   | 2K17MCUN02067 | 8368171133 | Investor Mantra                    | 6 Weeks  | 7000    |
| 122 |                        | Siddhi Agarwal    | 2K17MCUN02070 | 7982838183 | Stellar Concepts                   | 6 Weeks  | 5000    |
| 123 |                        | Yashveer Singh    | 2k17MCUN02077 | 750369912  | Campbell Scientific India Pvt Ltd. | 6 Weeks  | 0       |
| 124 |                        | Rishabh Aggarwal  | 2K17MCUN02054 | 9717577550 | Standard Electric Co               | 2 Months | 5000    |
| 125 |                        | Tuhin Garg        | 2K17MCUN02074 | 9891120333 | Maa Kudargarhi Steels Pvt. Ltd.    | 4 Weeks  | 8000    |
| 126 |                        | Ashna Gupta       | 2K17MCUN02001 | 9650486284 | CA Family                          | 6 Weeks  | 7000    |
| 127 |                        | Kanishk Rao       | 2K17MCUN02026 | 8860268289 | HDFC Bank                          | 6 Weeks  | 4000    |
| 128 |                        | Sanchit Kharbanda | 2K17MCUN02060 | 9821803283 | Shiprocket                         | 6 Weeks  | 8000 pm |
| 129 |                        | Jatin Arora       | 2K17MCUN02023 | 9555155560 | Shiprocket                         | 6 Weeks  | 8000 pm |

|     |     |                 |               |            |                           |         |       |
|-----|-----|-----------------|---------------|------------|---------------------------|---------|-------|
| 130 |     | Ayyaz Mohammed  | 2K17MCUN02079 | 9557648664 | Usha Rectifier Pvt Ltd    | 5 Weeks | 0     |
| 131 |     | Mohammad Anas   | 2K17MCUN02038 | 7503776061 | Usha Rectifier Pvt Ltd    | 5 Weeks | 0     |
| 132 |     | Kalash Arora    | 2K17MCUN02025 | 9971941658 | Policy Bazaar             | 8 Weeks | 20000 |
| 133 |     | Oshin           | 2K17MCUN02045 | 8800348171 | Cherry Blossom            | 4 Weeks | 5000  |
| 134 |     | Muskan Umar     | 2K17MCUN02040 | 8800348171 | Cherry Blossom            | 4 Weeks | 5000  |
| 135 |     | Desh Pareek     | 2K17MCUN02017 | 9013891171 | Shiprocket                | 8 Weeks | 16000 |
| 136 |     | Nimish Gupta    | 2K17MCUN02081 | 9958613839 | K S Chaudhry pvt ltd.     | 4 Weeks | 8000  |
| 137 |     | Radhika Nigam   | 2K17MCUN02049 | 7703884340 | manish rubber co          | 4 Weeks | 7000  |
| 138 |     | Sisira Sivaraj  | 2K17MCUN02072 | 9205752903 | Alpine Impex Pvt. Ltd     | 4 Weeks | 5000  |
| 139 |     | Archit Gupta    | 2K17MCUN02010 | 9968108050 | Shiprocket                | 8 Weeks | 16000 |
| 140 |     | Gunjan Chopra   | 2K17MCUN02022 | 7701857422 | IEMS Global               | 6 Weeks | 5000  |
| 141 |     | Ronit Chopra    | 2K17MCUN01009 | 8851476834 | Anupam Sweets             | 8 Weeks | 14000 |
| 142 | DMC | Sarthak Maggu   | 2K17MCUN01010 | 7027064697 | Non Stopper Shopper       | 8 Weeks | 14000 |
| 143 |     | Raja Vashist    | 2K17MCUN02052 | 9711180903 | Coca Cola India           | 4 Weeks | 8000  |
| 144 |     | Pranav Saini    | 2K17MCUN02048 | 9650837210 | MHPS                      | 8 weeks | 5000  |
| 145 |     | Shivani Sharma  | 2K17MCUN02066 | 9773521016 | whirlpool Corporation     | 4 weeks | 5000  |
| 146 |     | Garima Sharma   | 2K17MCUN02019 | 8447487916 | Ca Firm                   | 4 weeks | 3000  |
| 147 |     | Shubham Gupta   | 2K17MCUN02068 | 8076709777 | Paras Industries          | 6 Weeks | 5000  |
| 148 |     | Shivani         | 2K17MCUN02065 | 9650520705 | JCB Ltd                   | 4 weeks | 4000  |
| 149 |     | Sapna Goswami   | 2K17MCUN02062 | 9599116541 | Ca Firm                   | 4 weeks | 0     |
| 150 |     | Gourav Mehta    | 2K17MCUN02020 | 7015345613 | Kailash & B Associates    | 4 weeks | 0     |
| 151 |     | Simran Mehta    | 2K17MCUN02071 | 9910636642 | Visit Health Care Pvt Ltd | 4 Weeks | 8000  |
| 152 |     | Siddharth       | 2K17MCUN01011 | 8700213640 | Corfoam Pvt Ltd           | 4 weeks | 12000 |
|     |     | Anmol Sethi     | 2K17MCUN01002 | 9625629545 | Dhruv Globals             | 4 weeks | 5000  |
| 154 |     | Siddharth Yadav | 2K17MCUN02069 | 9873631314 | Yadav Packagings          | 6 Weeks | 8000  |

|     |                    |                   |               |   |  |         |      |
|-----|--------------------|-------------------|---------------|---|--|---------|------|
| 155 |                    | Arnav Mukherjee   | 2K17MCUN02011 | 9870189905                                  | Blue Lotus   | 6 Weeks | 0    |
| 156 |                    | Bhavya Dhawan     | 2K17MCUN02015 | 7503786004                                  | Blue Lotus   | 6 Weeks | 0    |
| 157 |                    | Vanshika Kathuria | 2K17MCUN02075 | 8708265190                                  | Roop Automativ Ltd.                                  | 6 Weeks | 5000 |
| 158 |                    | Rahul Jakhar      | 2K17MCUN02050 | 9810040220                                  | Tamta Constructions                                  | 6 Weeks | 5000 |
| 159 |                    | Shivam Parashar   | 2K17MCUN02063 | 8384080181                                  | Edumonk foundation                                   | 6 Weeks | 0    |
| 160 |                    | Ayush Sharma      | 2K17MCUN02013 | 8384080181                                  | <a href="http://housethat.co.in">housethat.co.in</a> | 6 Weeks | 0    |
| 161 |                    | Ojusvi Sardana    | 2K17MCUN02044 | 958,278,828                                 | Escorts Corporate Group                              | 6 Weeks | 5000 |
| 162 |                    | Mariya Ilyas      | 2K17MCUN02036 | 9582013391                                  | Darbar Gadgets,                                      | 6 Weeks | 0    |
| 163 |                    | Ravikant Singh    | 2K17MCUN02053 | 9267946793                                  | S Daryani and Associates                             | 6 Weeks | 0    |
| 164 |                    | Aakash Kannan     | 2K17MCUN01001 | 9773539386                                  | Venketeshwara Tamilnadu (workshop)                   | 6 Weeks | 0    |
| 165 | <b>LAW</b>         | Tejaswi Dudeja    | 2K17LWUN01044 | 7005817588                                  | Suvesh and ASG                                       | 4 Weeks |      |
| 166 |                    | Abhinav Bhaskar   | 2K17LWUN01002 | 9999611873                                  | Legal Intellets                                      | 4 Weeks |      |
| 167 |                    | Anas Khan         | 2K17LWUN01006 | 9871434397                                  | Adv. S.Y.Jamal                                       | 4 Weeks |      |
| 168 |                    | Anoushka Sharma   | 2K17LWUN01009 | 9818566599                                  | ASG Mr. Vikramjit Banerjee                           | 4 Weeks |      |
| 169 |                    | Arfa Ali          | 2K17LWUN01010 | 9810726097                                  | Hassan and Associates (Adv Abdul Waheed)             | 4 Weeks |      |
| 170 |                    | Gautam Satiya     | 2K17LWUN01013 | 9953281336                                  | Adv. Aditya Gupta                                    | 4 Weeks |      |
| 171 |                    | Jatin Chauhan     | 2K17LWUN01016 | 8447072903                                  | ASG Mr. Vikramjit Banerjee                           | 4 Weeks |      |
| 172 |                    | Kajal NA Goel     | 2K17LWUN01017 | 9871184115                                  | Adv. Sunder Lal                                      | 4 Weeks |      |
| 173 | Kshitij Kumar      | 2K17LWUN01019     | 9953457795    | J. Mr. Kailash Gambhir                      | 4 Weeks  |         |      |
| 174 | Madhoo Kant Bhatia | 2K17LWUN01020     | 9717884343    | Mona Singh (Chief judicial magistrate,DLSA) | 4 Weeks  |         |      |
| 175 | Manan NA Chawla    | 2K17LWUN01021     | 8076759536    | Adv. Amit Behl                              | 4 Weeks  |         |      |
| 176 | Manmeet Chawla     | 2K17LWUN01022     | 9911487979    | Adv. Karnail Sungh                          | 4 Weeks  |         |      |

|     |                    |               |            |                                 |         |  |
|-----|--------------------|---------------|------------|---------------------------------|---------|--|
| 177 | Neha Tiwari        | 2K17LWUN01025 | 9911711851 | ASG Mr. Atmaram N.S. Nadkarni   | 4 Weeks |  |
| 178 | Pawan NA Bhatia    | 2K17LWUN01031 | 9555838106 | Adv. Shafiq - Supreme Court     | 4 Weeks |  |
| 179 | Prashant NA Yadav  | 2K17LWUN01032 | 9729567828 | Adv. Tulsi Yadav                | 4 Weeks |  |
| 180 | Priyank NA Besoya  | 2K17LWUN01033 | 9911447667 | Adv. Ram Avtar Sharma           | 4 Weeks |  |
| 181 | Ramdatt Bhati      | 2K17LWUN01034 | 9871924687 | Adv. Aditya Gupta & associates, | 4 Weeks |  |
| 182 | Saubhagya NA Sarup | 2K17LWUN01039 | 9357705239 | J.K.K.Lahoti                    | 4 Weeks |  |
| 183 | Soumya NA Sharma   | 2K17LWUN01041 | 9910040165 | Justice M.L. Mehta              | 4 Weeks |  |
| 184 | Tarun NA NA        | 2K17LWUN01042 | 9873457327 | Anil Kumar Basoya               | 4 Weeks |  |
| 185 | Tejaswi Dudeja     | 2K17LWUN01044 | 7005817588 | ASG Vikramjit Bannerjee         | 4 Weeks |  |
| 186 | Thejanuo Metha     | 2K17LWUN01045 | 9968235554 | Akhotso Kehie                   | 4 Weeks |  |
| 187 | Urvi               | 2K17LWUN01046 | 9910495595 | Adv. Tariq Khan                 | 4 Weeks |  |
| 188 | Vishal Choudhary   | 2K17LWUN01051 | 8800468898 | ASG Mr. Atmaram N.S. Nadkarni   | 4 Weeks |  |
| 189 | Deepak Sharma      | 2K17LWUN01053 | 9599360694 | Adv. Swarupma Chaturvedi        | 4 Weeks |  |
| 190 | Jatin Rheja        | 2K17LWUN01054 | 9911750441 | Adv. Shashank Shekhar           | 4 Weeks |  |
| 191 | Supreet            | 2K18LWUM01001 | 9999117580 | Adv. Vidya sagar                | 4 Weeks |  |
| 192 | Amolak             | 2K18LWUM01002 | 9654458581 | Adv. Vidya sagar                | 4 Weeks |  |
| 193 | Amit Yadav         | 2K17LWUN02004 | 9818165216 | Adv. Dharmander Sharawat        | 4 Weeks |  |
| 194 | Anshu chauhan      | 2K17LWUN02034 | 8448970089 | Adv. Neena Sharma               | 4 Weeks |  |
| 195 | Ayush NA Gupta     | 2K17LWUN02005 | 7838221628 | Adv. Dharmander Arya            | 4 Weeks |  |
| 196 | Deepanshi Bhutani  | 2K17LWUN02007 | 9818353144 | Adv. Arun Sharma                | 4 Weeks |  |
| 197 | Harsh Khari        | 2K17LWUN02010 | 9990405720 | Adv. Subhash Tanwar             | 4 Weeks |  |
| 198 | Hrithik Manchanda  | 2K17LWUN02011 | 9968113433 | Justice Kailash Gambhir         | 4 Weeks |  |
| 199 | Muskan NA Goyal    | 2K17LWUN02019 | 9034365678 | Adv. Sunil Kumar Gupta          | 4 Weeks |  |

|     |     |                       |                |            |  |         |  |
|-----|-----|-----------------------|----------------|------------|--|---------|--|
| 200 | LAW | Nikhil NA Thakur      | 2K17LWUN02020  | 9953494940 | Justice M.L. Mehta                               | 4 Weeks |  |
| 201 |     | Pranjali Bharti       | 2K17LWUN02021  | 8800680608 | Adv. Sanjay Vashishtha                           | 4 Weeks |  |
| 202 |     | Pratyush Chhabra      | 2K17LWUN02022  | 8587882090 | Adv. Arun Sharma                                 | 4 Weeks |  |
| 203 |     | Rahul Malik           | 2K17LWUN02025  | 7042653053 | Ms. Mona Singh (Chief Judicial Magistrate, DLSA) | 4 Weeks |  |
| 204 |     | Sachin Yadav          | 2K17LWUN02026  | 9811581103 | Adv. Rahul Yadav                                 | 4 Weeks |  |
| 205 |     | Saumya Bajaj          | 2K17LWUN02027  | 9555551156 | Adv. Saket Sikri                                 | 4 Weeks |  |
| 206 |     | Shagun NA Sarohi      | 2K17LWUN02028  | 9891236550 | Ms. Mona Singh (Chief Judicial Magistrate, DLSA) | 4 Weeks |  |
| 207 |     | Shubham NA Aggarwal   | 2K17LWUN02029  | 9311018569 | Adv. Arun Sharma                                 | 4 Weeks |  |
| 208 |     | Mukul                 | 2K17LWUN03003  | 9560183818 | Adv. Akshat Goel                                 |         |  |
| 209 |     | Aman                  | 2K17LWUN03004  | 9911558849 | Adv. Akshat Goel                                 |         |  |
| 210 |     | Krishhan Dev          | 2K17LWUN03005  | 9810411194 | Adv. Akshat Goel                                 |         |  |
| 211 |     | Vatsala Bhusari       | 19011111LA9    | 7065876328 | Adv. Sakiya Choudhary                            | 4 Weeks |  |
| 212 |     | Aditya Chaudhary      | 22K18LWUN01002 | 9717303320 | Rajnikant  | 4 Weeks |  |
| 213 |     | Ayushi Sharma         | 2K18LWUN01007  | 8448334027 | T.K. Ganju                                       | 4 Weeks |  |
| 214 |     | Divya Mishra          | 2K18LWUN01011  | 8053636348 | Girish Kargeti                                   | 4 Weeks |  |
| 215 |     | Mansi Sharma          | 2K18LWUN01016  | 9718095856 | Ram Singh Yadav                                  | 4 Weeks |  |
| 216 |     | Perna Dayal           | 2K18LWUN01025  | 8178663638 | Praveen Nagar                                    | 4 Weeks |  |
| 217 |     | Raghav Singh Dhariwal | 2K18LWUN01027  | 9560740969 | Rajnikant  | 4 Weeks |  |
| 218 |     | Shubhangi Sharma      | 2K18LWUN01031  | 9811368279 | T.K. Ganju                                       | 4 Weeks |  |
| 219 |     | Sneha Ranjan          | 2K18LWUN01032  | 7352953035 | Priya Ranjan                                     | 4 Weeks |  |
| 220 |     | Teena Tanwar          | 2K18LWUN01036  | 9899966760 | Dr. Archana Bhatia                               | 4 Weeks |  |
| 221 |     | Deeksha               | 2K18LWUN01040  | 9990700015 | Ashutosh Pandey                                  | 4 Weeks |  |

|     |                     |               |            |                   |         |  |
|-----|---------------------|---------------|------------|-------------------|---------|--|
| 222 | Deeksha Vashisht    | 2K18LWUN01043 | 8929616178 | Sunil Nagar       | 4 Weeks |  |
| 223 | Ankit Narwat        | 2K18LWUN01046 | 8130271773 | Shalinder Rathi   | 4 Weeks |  |
| 224 | Abdul Momin Mullick | 2K18LWUN02001 | 9810235951 | Girish Kargeti    | 4 Weeks |  |
| 225 | Hrithik Kumar       | 2K18LWUN02010 | 9818574992 | DS Chauhan        | 4 Weeks |  |
| 226 | Ketan               | 2K18LWUN02015 | 9310704333 | Ashutosh Nema     | 4 Weeks |  |
| 227 | Nandini Gaur        | 2K18LWUN02017 | 9266100003 | Kuldeep Singh     | 4 Weeks |  |
| 228 | Rashi               | 2K18LWUN02041 | 9711835980 | Ashutosh Pandey   | 4 Weeks |  |
| 229 | Smriti Sian         | 2K18LWUN02023 | 9891009000 | Ashutosh Nema     | 4 Weeks |  |
| 230 | Vishal Tanwar       | 2K18LWUN02026 | 9999112831 | Kavita Chauhan    | 4 Weeks |  |
| 231 | Neha Nandwani       | 2K18LWUN02031 | 9212535504 | Kavita Chauhan    | 4 Weeks |  |
| 232 | Abhinav Gupta       | 21805003N005  | 9871436625 | Praveen Nagar     | 4 Weeks |  |
| 233 | Harshita            | 21805003N009  | 9891682001 | Dr. Romesh Gautam | 4 Weeks |  |
| 234 | Shanu Agarwal       | 21805003N009  | 7023339333 | Anil Parashar     | 4 Weeks |  |

## 5.2 Students Placement Opportunities

Placement records for the Engineering stream have been excellent as the curriculum is designed for the courses as per the Industry requirements and needs. More than 80% eligible students get placed in renowned companies every year. Department of Computer Science & Technology strongly believes that practical knowledge and familiarity with work environment is very necessary for young engineers. The esteemed recruiters for CST students include LinkedIn, TCS, Accenture, NIIT Technologies, Amazon, Samsung R&D, Wipro, Nokia, Ericsson, HP, IBM, EX2, Open Text, Infogain, Aon Hewitt, Morplus, HCL, CMC, Sunlife, Josh Technologies, Collabera, Maintech, Crowe Horwath IT and many more. Department of Mechanical Engineering has got excellent placement record of students in Core Companies. In the current year, the students got placements in various companies with package ranging from Rs. 2.4 LPA (approx.) to Rs.5.5 LPA with an average of Rs. 3.5 LPA. Some of the companies which placed students into their fold were Krishna Maruti, Tata Steel, Indigo Airlines, Expert Lancing, Stryker, Minda Nabtesco Automotive Pvt. Ltd, Tomita India Pvt. Ltd., Oppo Mobile, Gulati Auto Electricals Pvt. Ltd and so on. Apart from these sectors, they can be suitably employed in Manufacturing Industries, Refrigeration and Air Conditioning Industries, HPCL, BPCL, Railways and Armed Forces. They can also get employment in various Software Companies like TCS, Infosys and L&T etc. Department of Electronics & Communication Engineering has developed the curriculum so that students attain hardware and software engineering skills in an integrated way and the analytical powers to apply them jointly. Students have been well placed in the admired companies like



Collabera Amazon, IBM, Eureka Forbes, Elcapino, Maintec Technologies, Real Time Data Services, Lambda Group, COBO, Good Karma, having an average package of 3.5 LPA. Department of Chemistry has got good placement record of students in Core Companies like Agilent Technologies, IOCL R&D Centre, Sud-Chemie and Federal bank, having an average package of 5.5 LPA.

**Table below gives the list of companies where students of 2019 batch have been placed.**

| PLACEMENT |           |                     |               |             |   |         |
|-----------|-----------|---------------------|---------------|-------------|---|---------|
| Sl. No.   | Deptt.    | Student Name        | Roll No.      | Contact No. | Company Details   | Package |
| 1         | B.TECH-ME | Shivam Mahajan      | 2K15MEUN01029 | 9899586606  | Stryker   | 3       |
| 2         |           | Shivam Bansal       | 2K15MEUN01028 | 8800710735  | Agla Sem Edutech Pvt.Ltd,Capitalvia Global Research Ltd, Indigo, Tata Steel | 5.25    |
| 3         |           | Himanshu Garg       | 2K15MEUN01011 | 8010119300  | Stryker   | 3       |
| 4         |           | Dheeraj             | 2K15MEUN01006 | 8800862072  | Gulati Auto Electricals Pvt. Ltd  | 2.4     |
| 5         |           | Motiur Rahman       | 2K15MEUN01020 | 9643859964  | Gulati Auto Electricals Pvt. Ltd  | 2.4     |
| 6         |           | Kunal Singh         | 2K15MEUN01016 | 9717309891  | Gulati Auto Electricals Pvt. Ltd  | 2.4     |
| 7         |           | Surya Pratap Singh  | 2K15MEUN01031 | 9999431933  | Capitalvia Global Research Ltd  | 3       |
| 8         |           | K Aditya            | 2K15MEUN01014 | 8130336933  | Gulati Auto Electricals Pvt. Ltd, Nicotra Gebhardt-Noida                    | 3.25    |
| 9         |           | Rajeev Ranjan Singh | 2K15MEUN01027 | 9650280720  | Gulati Auto Electricals Pvt. Ltd, Kotak Mahindra Bank, Dynotech Instruments | 2.4     |
| 10        |           | Gautam Ahuja        | 2K15MEUN01008 | 9650165603  | Stryker, Minda Nabtesco Automotive Pvt. Ltd                                 | 3       |
| 11        |           | Karan Sehgal        | 2K15MEUN01015 | 8800463890  | Gulati Auto Electricals Pvt. Ltd  | 2.4     |
| 12        |           | Rahul Lamba         | 2K15MEUN01026 | 8396014040  | Polymedicure  | 3.5     |
| 13        |           | Pushpinder Singh    | 2K15MEUN01024 | 9911372968  | Indigo  | 2.4     |
| 14        |           | Avneet              | 2K15MEUN01003 | 9582743337  | Indigo, Tata Steel  | 5.25    |
| 15        |           | Gurpreet Singh      | 2K15MEUN01009 | 9910854884  | Minda Nabtesco Automotive Pvt. Ltd,   | 3       |

|    |  |                 |               |            |                       |      |
|----|--|-----------------|---------------|------------|-----------------------|------|
|    |  |                 |               |            | Uno Minda             |      |
| 16 |  | Himanshu Gulati | 2K15MEUN01012 | 9582691616 | Tomita India Pvt.Ltd. | 2.16 |
| 17 |  | Mukul Chaudhary | 2K15MEUN01021 | 8130777008 | Oppo Mobile           | 2.42 |
| 18 |  | Tushar Gupta    | 2K15MEUN01031 | 8285464368 | Krishna Maruti        | 2.4  |

|    |                   |                   |               |            |  |       |
|----|-------------------|-------------------|---------------|------------|--|-------|
| 19 | <b>B.TECH-ECM</b> | Nikhil Kumar      | 2K15ECUN01003 |            | Collabera, Maintec Technologies                              | 2.2   |
| 20 |                   | Prashant Narang   | 2K16ECUM01002 |            | CaptialVia Global Research Ltd, Expert Lancing, Sagacious IP | 3.6   |
| 21 |                   | Raghav Rastogi    | 2K15ECUN01004 |            | Truechip Solutions   | 5.5   |
| 22 |                   | Shubjham Jesaiwal | 2K16ECUL01001 |            | Collabera  | 2.2   |
| 23 |                   | Aman Sharma       | 2K15ECUN01002 |            | Maintec Technologies, Real Time Data Services, Lambda Group  | 3.34  |
| 24 | <b>B.TECH-CSE</b> | Chaitanya Rana    | 2K15CSUN01071 | 9953884053 | Cubical Labs, Jaro Education                                 | 3, 12 |
| 25 |                   | Aman Bhardwaj     | 2K15CSUN01004 | 9958525789 | Cvent  | 5.55  |
| 26 |                   | Abhinav Sethi     | 2K15CSUN01033 | 8800380168 | CXC Infotech   | 3.5   |
| 27 |                   | Nilansh Dewan     | 2K15CSUN01048 | 9873019000 | Dollar Advisory  | 3.42  |
| 28 |                   | Lakshaya Bhardwaj | 2K15CSUN01015 | 9599047269 | Dollar Advisory  | 3.42  |
| 29 |                   | Riya Choudhary    | 2K15CSUN01089 | 9818799919 | LIST India Private Limited                                   | 3.85  |
| 30 |                   | Vaibhav Sachdev   | 2K15CSUN01097 | 9999224681 | Maven Wave   | 4     |
| 31 |                   | Aditya Nandwani   | 2K15CSUN01034 | 7290017871 | Mphasis  | 2.5   |
| 32 |                   | Aditya Nandwani   | 2K15CSUN01034 | 7290017871 | Mphasis  | 2.5   |
| 33 |                   | Varniva Kapoor    | 2K15CSUN01030 | 9582063765 | NIIT Technologies  | 3.2   |
| 34 |                   | Sanya Singh       | 2K15CSUN01056 | 7838541450 | NIIT Technologies  | 3.2   |
| 35 |                   | Kartik Sibal      | 2K15CSUN01014 | 7503756876 | NIIT Technologies  | 3.2   |
| 36 |                   | Abhinav Sharma    | 2K15CSUN01064 | 8285864867 | NIIT Technologies  | 3.2   |

|    |  |                       |               |            |   |                      |
|----|--|-----------------------|---------------|------------|---|----------------------|
| 37 |  | Arpita Goel           | 2K15CSUN01039 | 8920346287 | NIIT Technologies                               | 3.2                  |
| 38 |  | Simran Sachdev        | 2K15CSUN01028 | 7011104708 | NIIT Technologies                               | 3.2                  |
| 39 |  | Gazal Chaudhary       | 2K15CSUN01010 | 9711682132 | NIIT Technologies                               | 3.2                  |
| 40 |  | Himani Gupta          | 2K15CSUN01011 | 8587807423 | NIIT Technologies                               | 3.2                  |
| 41 |  | Smridhi Chawla        | 2K15CSUN01060 | 7838201246 | NIIT Technologies                               | 3.2                  |
| 42 |  | Piyush Bajpai         | 2K15CSUN01049 | 9540806512 | ICL Systems ProHLP Solutions                    | 9.15 4.5             |
| 43 |  | Rishabh Matharoo      | 2K15CSUN01088 | 8744866067 | ProHLP Solutions                                | 4.5                  |
| 44 |  | Ankit Dahiya          | 2K15CSUN01005 | 9999354116 | Quovantis Technologies                          | 4                    |
| 45 |  | Avnish Khatri         | 2K15CSUN01007 | 8587846866 | Real Time Data Services, Jaro Education         | 3.34, 12             |
| 46 |  | Davinder Kaur         | 2K15CSUN01073 | 9711420233 | Successive Technologies                         | 2.5                  |
| 47 |  | Cherry Singh          | 2K15CSUN01008 | 9582007383 | TCS   | 3.36                 |
| 48 |  | Aditi Gupta           | 2K15CSUN01002 | 9650310934 | TCS   | 3.36                 |
| 49 |  | Aaditya Gupta         | 2K15CSUN01001 | 9999007757 | TCS   | 3.36                 |
| 50 |  | Saurav Kumar          | 2K15CSUN01026 | 9122698048 | TCS   | 3.36                 |
| 51 |  | Ramandeep Singh Dehal | 2K15CSUN01051 | 8373932509 | TCS   | 3.36                 |
| 52 |  | Utkarsh Kaushik       | 2K15CSUN01096 | 8447618426 | TCS   | 3.36                 |
| 53 |  | Shreya Khandelwal     | 2K15CSUN01058 | 9811625957 | Samsung R&D, HSBC, TCS                          | 8, 7, 3.36           |
| 54 |  | Muskaan Gupta         | 2K15CSUN01017 | 9910144070 | TCS   | 3.36                 |
| 55 |  | Shubham Sharma        | 2K15CSUN01059 | 8800537975 | TCS   | 3.36                 |
| 56 |  | Anupama Chauhan       | 2K15CSUN01038 | 7838434382 | To The New                                      | 3.75                 |
| 57 |  | Yashesh Dagar         | 2K15CSUN01032 | 9810330073 | Valtech India Pvt Ltd                           | 3.5                  |
| 58 |  | Riya Chauhan          | 2K15CSUN01052 | 9069958886 | Wipro   | 3.5                  |
| 59 |  | Shraddha Bhatia       | 2K15CSUN01094 | 9811757563 | Nokia, Bull Mart Research, Cubical Labs, Lambda | 4.5, 3.36, 3.00, 2.4 |

|    |                  |                    |               |            |   |              |
|----|------------------|--------------------|---------------|------------|---|--------------|
| 60 |                  | Shivangi Aggarwal  | 2K15CSUN01057 | 8285305009 | Capitalvia, Dollar Advisory                   | 3.03, 3.42   |
| 61 |                  | Himanshu Miglani   | 2K15CSUN01044 | 8285020820 | Capitalvia, Real Time Data Services           | 3.03, 3.34   |
| 62 |                  | Varnita Jain       | 2K15CSUN01062 | 8587828301 | List India Private Limited, TCS               | 3.85         |
| 63 |                  | Riya Nagpal        | 2K15CSUN01053 | 9871353454 | IHS Markit, LIST India Private Limited, Wipro | 6.31, 3.85   |
| 64 |                  | Shreya Mittal      | 2K15CSUN01027 | 9871762338 | List India Private Limited, TCS, Wipro        | 3.85         |
| 65 |                  | Ayush Sharma       | 2K15CSUN01041 | 9953736105 | Nodwin Gaming                                 | 3            |
| 66 |                  | Karan Kaushik      | 2K15CSUN01079 | 8860995545 | Crowe Horwath IT                              | 3.25         |
| 67 |                  | Pratham Sharma     | 2K15CSUN01085 | 7999999265 | Moglix, Real Time Data services               | 4, 3.75      |
| 68 |                  | Himanshu Arora     | 2K15CSUN01076 | 9811219562 | Satin Creditcare Network Ltd., Inyxa          | 4, 2.2       |
| 69 |                  | Vijay Kumar        | 2K15CSUN01031 | 8826728508 | Inyxa   | 2.2          |
| 70 |                  | Samarth Seti       | 2K17CSUM01003 | 9145108988 | Indus Valley Partners                         | 5.75         |
| 71 |                  | Sahil Sharma       | 2K15CSUN01091 | 9643939029 | Volvo Eicher, Cognizant                       | 6, 3.38      |
| 72 |                  | Arquish Ali Ansari | 2K15CSUN01040 | 9716040903 | Studio Graphene Pvt. Ltd., Cognizant          | 4, 3.38      |
| 73 | <b>MATHS</b>     | Aayush Chaudhary   | 2K15MAUN01001 | 7011136385 | Accenture, Gurugram                           | 2.4          |
| 74 | <b>CHEMISTRY</b> | Barkha Kaushik     | 2K16CHPN01003 | 9971098530 | IOCL R&D Centre, Faridabad                    | 2,14,800(PA) |
| 75 |                  | Himanshi Kaushik   | 2K16CHPN01005 | 9891430049 | IOCL R&D Centre, Faridabad                    | 2,14,800(PA) |
| 76 |                  | Aanchal Singh      | 2K16CHPN01001 | 9999220562 | Agilent Technologies, Manesar, Gurgaon        | 884,370(PA)  |
| 77 |                  | Shivangi Kataria   | 2K16CHPN01014 | 8395954142 | SUD-Chemie, Hydrabad                          | 352000(PA)   |
| 78 |                  | Divya Chhabra      | 2K16CHPN01004 | 9990914806 | IOCL R&D Centre, Faridabad                    | 20944(PM)    |
| 79 |                  | Shivangi Panwar    | 2K16CHPN01013 | 9555505895 | IOCL R&D Centre, Faridabad                    | 20944(PM)    |
| 80 |                  | Priyanka Arora     | 2K16CHPN01009 | 8053482938 | IOCL R&D Centre, Faridabad                    | 20944(PM)    |
| 81 |                  | Drishti Mittal     | 2K17CHPN01001 | 8130974009 | Federal Bank                                  | 57,000(PM)   |

## **CHAPTER-6**

### **INTERNATIONAL COLLABORATION AND LINKAGES**

**Manav Rachna University has academic collaborations with foreign Universities/Institutions in different parts of the world to provide international exposure to the students and faculty members in the form of summer/winter schools, international internship, higher education opportunities and joint research. These international linkages enable the students and faculty for teaching, research and training. The international activities at MRU are facilitated by the International Activities Committee (IAC).**

**The IAC attempts to enhance the academic and cultural experience of its students and staff. The responsibility of IAC is to coordinate all international cooperation activities including:**

- International exchange of MRU/international students/faculty members/staff to (and from) foreign universities;
  - collaborative research and academic programmes;
  - visits of international delegates;
  - the processes and procedures regarding international collaborations.
- 
- **International Internship@University of Kelaniya, Colombo, Sri Lanka (June-July 2018)** Ms. Chhavi Baliyan of B.Sc. (Hons.) Mathematics (III Sem) attended an International Summer Internship programme 'Be Sri Lankan' (4-weeks) at University of Kelaniya, Colombo, Sri Lanka. The Internship Programme was organised by AIESEC IIT Delhi, India. As a part of the programme, Ms. Chhavi attended conferences and discussion forums on Employment & History of Sri Lanka and conducted classes for English language for secondary students in rural areas and for Mathematics for UG students at University of Kelaniya. Ms. Chhavi has been awarded with the Global Volunteer Leadership Development Experience and The AIESEC International Experience certificates for the project 'Be Srilankan'.
- 
- **Osh State University, Kyrgyzstan @Faculty of Education, MRU (13<sup>th</sup> October 2018)**  
As an extension of association of Faculty of Education, MRU, with Department of School Education, Panchkula, the Osh State University, Kyrgyzstan, visited MRU on 13th October 2018.

The Osh State University has 3,000 Indian Students pursuing Medical Studies). During the interaction, a virtual tour of Manav Rachna Vidyantariksha was organized which highlighted about our foreign collaborations across plethora and discussions on student and faculty exchange took place.

- **Senior Advisor to UN Secretary General arrives for Guest Lecture in Manav Rachna University (24<sup>th</sup> Nov 2018)**



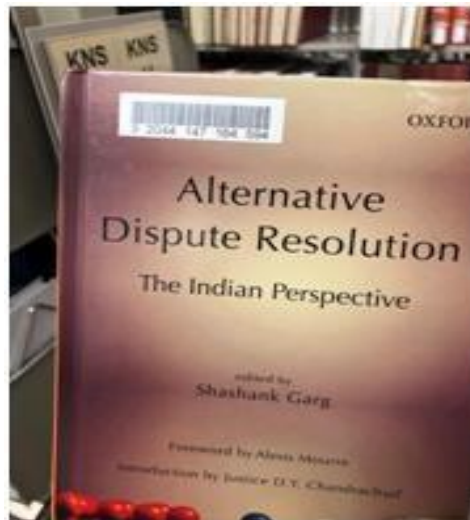
Department of Management, MRU, organized a Guest Lecture with the Professors and students of the department with Mr. Roland Schatz (CEO, Media Tenor and Senior Advisor to UN Secretary General) on 24<sup>th</sup> Nov 2018. Mr. Roland Schatz is the founder and CEO of Media Tenor International and he is the Senior Advisor to United Nations UN Secretary-General. He is also the founder of UNSGII Foundation. The interaction was centered on the 17 SDG's (Sustainable Development Goals) given by the United Nations towards a fully sustainable planet in 2030. All Deans, HODs and Faculties of MRU attended the enlightening session of Mr. Schatz.

- **Dr. Seema Sharma (Assistant Professor, MRU) Invited at UNESCO, Slovenia, under OE4BW Mentoring Programme (1<sup>st</sup> – 4<sup>th</sup> July 2019)**

Dr. Seema Sharma, Assistant Professor, Manav Rachna University was invited at UNESCO, Slovenia, under OE4BW mentoring programme (1<sup>st</sup> – 4<sup>th</sup> July 2019). She developed an OER on Emotional Intelligence, a 6 month-long project which required exemplary dedication along with content knowledge. The OER was developed with the aim of contributing to the achievement of 17 UNESCO Sustainable Development Goals and was applauded during the final presentation at Vipava, Slovenia.



- **Mr. Shashank Garg, Faculty of Law, makes his Presence at Ivy League University**



**Mr. Shashank Garg, Convener and Member of Advisory Board, Faculty of Law, Manav Rachna University, has been honoured with his book being added to Library of the Ivy League University which is synonymous with success and expertise.**

**One-day Workshop on “Writing and Publishing for Success” by Professor Julia Connell, Assistant Dean Research Training, University of Newcastle, Australia (11<sup>th</sup> July 2019)**

**Manav Rachna University organized a one-day workshop on “Writing and Publishing for Success” for faculty members and research scholars on 11th July 2019. Professor Julia Connell, Assistant Dean Research Training, University of Newcastle, Australia conducted the workshop. Prof. Julia highlighted the need for publication plans, weekly plan, structured abstracts and demonstrated the same through hands-on sessions. She also emphasized writing & publishing in Quality Journals and Research Career Planning.**



**Annexure 6.1 gives details of all collaborations Manav Rachna University is having with Foreign Universities/Institutions during July 2018-June 2019**

| <b>Signing date of MoU</b> | <b>University name</b>           | <b>Country</b> |
|----------------------------|----------------------------------|----------------|
| 05.09.2018                 | University of North Texas        | Texas          |
| 02.11.2018                 | Osh State University             | USA            |
| 01.12.2018                 | Western Sydney University        | Australia      |
| 02.11.2018                 | Illinois Institute of Technology | USA            |
| 05.06.2019                 | Ohio university                  | USA            |
| 04.05.2019                 | Norquest College                 | Canada         |
| 11.07.2019                 | Universiti Teknologi Malaysia    | Malaysia       |



## **CHAPTER-7**

### **OUTREACH & PROFESSIONAL SERVICES**

**Student activities are an integral feature to promote a vibrant, stimulating, engaging and respectful campus culture. Manav Rachna University creates a balance between academic, curricular and extracurricular activities for preparing the young adults for life.**

**The office of the Dean of Students is primarily concerned with students' welfare from entry to graduation. University life marks the beginning of one's career and requires one to make mental, physical and emotional adjustments. MRU promotes the participation of students at International & National Level Activities, Institute & Department Level Activities and Social Activities. MRU Students Council Body works through its different clubs such as Technical Club, Cultural Club, Literary Club and Sports Club. The body plans various activities such as contests, seminars, workshops, guest lectures etc.; publishes a students' activity calendar for the semester and accordingly organizes various co- and extracurricular activities. Financial aid is provided to the students for developing projects and their participation in various competitions at International as well as National level. All the activities of these clubs are managed by students, under the mentorship of a faculty member.**

**MRU hosted various activities around the year under the banner of different clubs like Technical, Cultural, Literary, Sports, Entrepreneurship Development cell and Socio. These clubs further expanded and new clubs were added as a branching. While MRU strives to offer an excellent educational experience to our students, our students also add feathers to the University's cap by their achievements and activities. An account of their achievement is given below:**

#### **7.1 STUDENT'S ACHIEVEMENTS**

##### **CONFERENCES/RESEARCH PAPER**

- Ms. Diksha Jasrotia, student of M.Sc. Mathematics IV semester presented a research paper entitled Literature Review on different techniques for better feasible solution of Transportation Problem at the 1st International Conference on Computer Algebra: Applications in Engineering organised by Anand International College of Engineering, Jaipur, (Supported by CIMPA, France) from March 5 - 7, 2019.
- Ms. Nikita Gulati, student of M.Sc. Mathematics IV semester presented a research paper entitled Literature Review of Transportation Problems at the International Conference on Machine Learning, Big Data, Cloud and Parallel Computing, Trends, Perspectives & Prospects organised by MRIIRS, Faridabad, Haryana, India from February 14 - 15, 2019.
- Ms. Komal, student of M.Sc. Mathematics IV semester presented a research paper entitled Literature Survey on Single and Multi Objective Transportation Problems at the International Conference SUSCOM - 2019 organised by Amity University, Rajasthan, and Jaipur, India from February 26 - 28, 2019.
- Gurpreet and Ravi Dutt, students of the ME Department, 8-Semester, attended the International Conference on New Frontiers in Engineering, Science and Technology (NFEST-2019) on 18

Feb 2019. This conference was organized by the National Institute of Technology, Kurukshetra, and Department of Mechanical Engineering. Conference was scheduled from 18-22 Feb 2019. Paper submitted by the students in collaboration with faculties was "Design, Analysis and Manufacturing of Front Sprocket from Carbon Fiber Reinforced Plastics for a bicycle". Paper to be published in Scopus indexed, IOP Journal of Physics: Conference series.

- Three of the B.Ed Semester I students namely Akshita Shukla, Bhawna Aggarwal and Jatin Kaushik secured First, Second and Third place respectively in Essay writing Competition on the theme of 'Corruption Free India' by Indian Oil Corporation on 5<sup>th</sup> Nov 2018.
- Akshita Shukla and Jitender, two of our B.Ed Semester I students volunteered and worked as interns in the area of exploration of Innovative Pedagogy in SD International School Kanpur from 17<sup>th</sup> December to 28<sup>th</sup> December 2018.
- 6 Four Students from B.Ed Semester IV Preeti, Himani, Nancy, Heena and Neha Verma along with four other students from B.Ed Semester II Aparajita Rathore, Rama Agnihotri, Ekta Gaur and Shruti Bhardwaj participated in the National Meet on Continuous Professional Development of School Teachers held at CIE, Dept of Education Delhi University on 20<sup>th</sup> Feb 2019.
- Himanshu Jha, B.Ed Semester II student selected as delegate in Asia World Model United Nations in Bali, Republic of Indonesia to be held from 13<sup>th</sup> to 16<sup>th</sup> November 2019. Acceptance letter received on 23<sup>rd</sup> May 2019.
- Students from MSc Chemistry Sem II, MRU (Arpita Sharma and Neha Sharma) went to Hansraj College, University of Delhi to attend the conference "Integrative Chemistry, Biology and Transational Medicine" held on 25-26 Feb 2019. The students presented their research work on the topic entitled "Stimuli Responsive Polymers for Drug Delivery".

#### **HACKATHON INNOVATION**

- Mukul Singh, Parul Taneja, Ridhi Sethi, Deepak Rana, and Abhishek Pandey of 2nd Year CSE Won Second Prize worth Rs.20000 in 24hrs HACKATHON "TECHNOVATION" theme – "Security & Surveillance held on 25<sup>th</sup> Jan 2019 at Greater Noida Industrial Development Authority in association with Sharda University.
- Parul Taneja, Deepak Rana and Mukul Singh of 2nd year Won Third Prize in Vihaan 2.0, 24 hrs Hackathon organized by IEEE Delhi Technical University and powered by PAYTM held on 18<sup>th</sup> Feb 2019.
- Ashish Verma 3rd year Selected as the Lead of Developer Student Club and won cash prize of of Worth Rs 10,000/- along with Internship offer from PAYTM and Online Cloud Credentials of Worth \$1,000. Developer Student Clubs (DSC) is a Google Developers program Lead of Developer Student Club, held on 20<sup>th</sup> Feb 2019 organized by Developer Student Clubs (DSC)

- Vivek Saini, Parul and Ashish students of Computer Science and Technology department, MRU of 2<sup>nd</sup> and 4<sup>th</sup> semester won first prize for the Event went to the Health Monitoring System under Makeathon 2019 on March 25<sup>th</sup> and 26<sup>th</sup>, 2019 by Manav Rachna Innovation & Incubation Center (#MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet.
- Ravi Prakash, Chandan Taneja, and Sarthak Sharma students of Computer Science and Technology department, MRU of 2<sup>nd</sup> semester won second prize for the Event went to the Bicycle Rental System under Makeathon 2019 on March 25<sup>th</sup> and 26<sup>th</sup>, 2019 by Manav Rachna Innovation & Incubation Center (#MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet.
- Prince and Lakshay Nagpal students of Computer Science and Technology department, MRU of 2<sup>nd</sup> semester won second prize for the Event went to the Air quality Node under Makeathon 2019 on March 25<sup>th</sup> and 26<sup>th</sup>, 2019 by Manav Rachna Innovation & Incubation Center (#MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet.
- Deepak student of Computer Science and Technology department, MRU of 4<sup>th</sup> semester won Best performer of the Makeathon 2019 on March 25<sup>th</sup> and 26<sup>th</sup>, 2019 by Manav Rachna Innovation & Incubation Center (#MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet.
- Shourya Singh student of Computer Science and Technology department, MRU of 2<sup>nd</sup> semester won the Best project in Social Innovation Category went to Automated water sprinkler system of the Makeathon 2019 on March 25<sup>th</sup> and 26<sup>th</sup>, 2019 by Manav Rachna Innovation & Incubation Center (#MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet.
- Ashish Aggarwal student of Computer Science and Technology department, MRU of 2<sup>nd</sup> semester was the Prize winner of Quiz Cum Debating Competition (with a cash prize of Rs. 3000/-) for the event Debate & Quiz @ Sustainable Development and Environment and General Awareness on 27<sup>th</sup> March 2019 organized by Manav Rachna & CSAR organized National Symposium on Sustainable Development, Environment Conservation and General Awareness.
- Ishu Goel, Palash Dubey, Abhishek Sontakke, Saurabh Sethi, Aditya Bhushan Sharma and Arish Fatima students of Computer Science and Technology department, MRU of 6<sup>th</sup> semester won the First Prize with prize money of 50,000/- and a trophy for the problem statement of MSME (AS01) under Smart India Hackathon 2019 - Software Edition on 2<sup>nd</sup>-3<sup>rd</sup> March 2019 organized by MHRD, Smart India Hackathon 2019 at nodal center LPU, Punjab.

- Ashish Verma, student of B.Tech. Computer Science Engineering 6th semester, Manav Rachna University, has been selected as the Lead of Developer Student Club on 22<sup>nd</sup> Feb 2019. Developer Student Clubs (DSC) is a Google Developers program for university students to learn mobile, web, cloud and ML development skills through community.
- Parul Taneja, Deepak Rana and Mukul Singh, B.Tech CSE 4<sup>th</sup> Semester students of Department of Computer Science & Technology, Manav Rachna University, participated in Vihaan 2.0, 24 hrs Hackathon organized by IEEE Delhi Technical University and powered by PAYTM. Students grabbed 3rd position among best 40 teams across the states. They got a Cash Prize of worth Rs 10,000/- along with Internship offer from PAYTM and Online Cloud Credentials of Worth \$1,000. The team got the opportunity to present their ideas in front of Product Manager of PAYTM, Co- Founder of Impactl.
- Four 6<sup>th</sup> semester Mechanical students won the first prize of Rs. 25,000/ in the “Contaception” event under Innoskills, 2019.
- B.Ed Semester II students Latika Arora and Himanshu Jha participated in Mitsubishi Electric Cup 2019 conducted by Mitsubishi Electric India Pvt Ltd on 15<sup>th</sup> and 16<sup>th</sup> Feb 2019.

#### **EXTRA CURRICULAR**

- Ms. Rashmi, BSc. (Hons.) sem-III won 2nd prize in Open District Badminton Championship held on 16<sup>th</sup> August 2018
- Ms. Rashmi, BSc. (Hons.) sem-III won 2nd prize in State Badminton Championship (KHEL MAHAKUMBH CHAMPIONSHIP) held on 11<sup>th</sup> – 13<sup>th</sup> Oct 2018
- Ms. Rashmi, BSc. (Hons.) sem-III won 1st prize in Relay Race, 1st prize in 100m race, at MRU on 11<sup>th</sup> – 13<sup>th</sup> Feb 2019
- Ms. Geetika Wadhwa, BSc. (Hons.) sem-V won 2<sup>nd</sup> Prize in SUDOKU competition, held at Daulat Ram College, University of Delhi on 21<sup>st</sup> February, 2019.
- Mr. Mukesh Kumar, B.Sc (H) Maths sem-V won 2<sup>nd</sup> prize in Palwal Distt. Power Lifting Championship on 30 June 2019.
- B.Ed Semester II students Latika Arora and Riya Arora participated in Pink Ribbon Art Festival conducted by Sarvodaya Trust and Department of Child Welfare, Haryana Govt. on 10<sup>th</sup> March 2019.
- B.Ed Semester II student Himanshu Jha participated as a volunteer in World Shooting

Championship conducted by ISSF during 18<sup>th</sup> Feb – 27<sup>th</sup> Feb 2019.

- B.Ed Semester II Students performed Street Play in Ankheer Village, Anangpur Village and in MRIIS14 as part of Drug Abuse Prevention Awareness Program under the Aegis of National Institute of Social Defence, Ministry of Social Justice & Empowerment, and Government of India. Name of the Students include Monika, Subhika, Nisha, Deepika, Shifali, Parul Yadav, Swati, Monika Sharma, Sarika Dabas, Ruby, Shubham, Jitender, Varsha, Kajal, Pooja, Shivani, Riya Arora, Ekta Gaur and Reena.
- B.Ed Semester II student Jatin Kaushik, secured first position in French Language and awarded certificate of achievement as Zenith, Art the Excellence by Manav Rachna Centre of Foreign Languages on 9<sup>th</sup> April 2019.
- Aprajita Rathore, B.Ed Semester II student qualified Combined Defense Service written examination conducted by Air Force Selection Board, the result of which was declared on 9<sup>th</sup> April 2019.
- Mr Ronit BBA EFB IV awarded certificate of achievement by Manav Rachna IIRS Life Skills Program in Jan 31, 2019 for Speech Competition.
- Ojasvi Sardana, BBA 4<sup>th</sup> Semester FAA won the 1<sup>st</sup> prize in FUTSAL (football) inter MR Sports Meet held on 26<sup>th</sup> and 27<sup>th</sup> March 2019.
- Badminton Practice Round was conducted in Q block sports arena. Students from MRU of different clans participated. Students played in doubles and singles under the guidance of Om Bir Singh. They were trained on handling of the equipment, formation of teams, service styles and postures.
- BBA HCM 2<sup>nd</sup> Semester students have been provided the summer internship in the prestigious hospitals like Sarvodaya and Asian Institute of Medical Sciences (Faridabad) and would be joining the hospitals on 3<sup>rd</sup> June for 5 weeks of internship.

## **7.2 ACTIVITIES ORGANIZED IN-HOUSE UNDER VARIOUS CLUBS**

### **7.2.1 TECHNICAL ACTIVITIES**

#### **IEEE Society**

- Hackathon was organized by the IEEE Student Branch of DTU (Delhi Technical University) in June 2018.
- MRU IEEE Student Branch organized a workshop in Spark Life Foundation on 21<sup>st</sup> September 2018. The main motive of the workshop was to increase awareness and impart knowledge to students regarding science and mathematics concepts.

- MRU IEEE Student Branch organized "Website Designing Competition" on 20th September 2018. Such competitions empowers creative and techno savvy students. The challenge was to design a smart website on the theme "IEEE and Education". The judges assessed the website on different parameters like content, structure, user interaction and innovation.
- The student branch of MRU IEEE organized an event named "LOGO QUIZ" on 28<sup>th</sup> September 2018. It was an event that required a general knowledge of logos. 30+ students participated in the event making the event successful.
- MRU IEEE organized a workshop for the students of "Spark Life Foundation NGO" on 7<sup>th</sup> October, 2018. The goal of the workshop was to enrich the knowledge of students regarding the basic computer software's.
- The student branch of MRU IEEE organized a 'workshop on Python' by Coding Ninjas on 17<sup>th</sup> January 2019. Such workshops empowers creative and techno savvy students. 30+ students participated in the event. The speaker from Coding Ninjas conducted small round of quiz to motivate and increase the interest of the students.
- IEEE MRU organized a fun event on 24<sup>th</sup> January, 2019 to regain the power of the enthusiastic gamers. As well said "Gamers don't die, they respawn."
- MRU IEEE Student Branch organized Cyber Security Workshop on 21<sup>st</sup> Feb 2019. The lecture session was delivered by Mr. Abhijit Singh, Infosec Trainer. He started the session with basics of Ethical Hacking, various types of hackers and necessity of security hackers. It was a knowledgeable session and students really enjoyed the workshop.
- IEEE MRU under affinity group, WIE organized workshop on Android App Development. The event was scheduled on 28<sup>th</sup> February, 2019. It was delivered by Mrs. Ankita Sharma, who is an "Android Consultant" at Ducat and have an industry expertise. The event was highly informative and students actively interacted with the consultant.
- MRU CST IPR (Intellectual Property Rights) CLUB organised an event on 25<sup>th</sup> April, 2019, in collaboration with IEEE MRU. The event started with a session from Ms. Neha Garg, Consulted

**I.P head, I.P Attorney on "Intellectual property: Copyright, trademarks and patents" who enlighten the students mind with her knowledge.**

- IEEE MRU under affinity group, WIE organized coding competition. The event was scheduled on 18<sup>th</sup> April, 2019. Participants were allowed to code in any language as per their convenience. At last, prizes were given to the winners.
- IEEE MRU organized WIE Ideathon on 11<sup>th</sup> April 2019 to enhance the engineering skills of the students by the innovative problem statements such as : Solid waste management in the

college campus, Mass notification, Disaster management using IOT, Low Cost Night Vision System for Intruder Detection, Back to Ayurveda Drug System, Cost effective Energy savings of Corridor/Classrooms/Laboratory/Staff Cabin Lighting System for K/L Block, Automatic gardening system in college, Virtual switches for classroom Android App on Student Portal Project Monitoring System.

- IEEE MRU has organized Meme war, a meme is an idea, behavior, or style that spreads from person to person. The event was scheduled on 26<sup>th</sup> April, 2019. Students enjoyed the activity.
- MRU IEEE hosted the prestigious IEEE Delhi Section Student Award Ceremony – 2K19 Edition on 3<sup>rd</sup> June 2019 with great joy and immense exultation. The Chief Guests Prof.Perna Gaur, Chairperson IEEE DSC, Prof. Rachana Garg, Vice-Chairperson IEEE DSC & SACDSC , Chief Guests Dr.Manoj Saxena ,Secretary IEEE DSC , Dr. Jasdeep Dhanoa , Treasurer IEEE DSC , branch councillors , mentors , SSN team and winners graced the event with their presence. The ceremony witnessed the gracious presence of the dignitaries – Prof. I K Bhat (Vice-Chancellor, MRU), deans, HODs and associate HODs from all departments. The guests addressed the students with their inspirational words. The following category of awards were presented:
  1. JK Pal Memorial Best Student Award
  2. Outstanding Student Volunteer Award
  3. Women in Engineering Student Volunteer Award
  4. Outstanding Branch Counsellor Award
  5. Student Network Delhi Section Team Awards

**Token of appreciation was also presented to Honourable Guests and Chief Guests for their gracious presence and unparalleled support Prof.Manpreet Kaur (Branch Counsellor, IEEE, MRU) received a token of gratitude for co-organising the event.**

**SAE society: For the session 2018-19, 2 workshops were conducted for 2018-2019. The details of the workshop conducted are:**

- SAE society organized an event of “Introduction to Euro Norms” on 13<sup>th</sup> September, 2018. The goal of the event was to create awareness with vehicle creating pollution and its courses.
- SAE society organized a SAE workshop on “Assembly & disassembly of engine and their components” on 20<sup>th</sup> September, 2018. The goal of the workshop was to give introduction to working principle of petrol and diesel engine and their working.
- SAE society organized an event on “Delcam & Mastercam” on 27<sup>th</sup> September, 2018. The domain of participation was die making.
- SAE society organized an event on “Introduction to Biofuels” on 11<sup>th</sup> October, 2018. The goal of

the workshop was to let the participants know about how biofuels are formed and why it is important to us with its limitation.

- SAE society organized an event on “Introduction to solid works” on 8<sup>th</sup> March, 2019. The goal of the workshop was to let participants know how 3D tools reduces the time for product development.
- SAE society organized an event on “Introduction to 3D modelling and simulating on Ansys” on 22<sup>nd</sup> February, 2019. The goal of the workshop was to let participants know use of 3D tools to develop products and check their performance through simulations.

## 7.2.2 CULTURAL & LITERARY ACTIVITIES

**In order to get the students engaged and trained for the passion they pursue and to promote Institution social responsibilities, Clan was formulated in MREI. To strengthen the Clan activities, Institution Wise slots were allocated for all five verticals such that Literary, Cultural, Sports, Media and ISR. In Manav Rachna University, Thursday is allocated for Manav Rachna Life Skills Program.**

- Manav Rachna Life Skill Programme under the Literary Vertical celebrated Women’s Day by organizing **Quiz Competition** on March 7, 2019 to promote a fun way of enriching the learning process and fostering teamship.
- Manav Rachna Life Skill Programme under the Cultural Vertical conducted talent hunt for street dance and music on 14<sup>th</sup> March 2019. The event started with a Dance Flash Mob by the dance society of MRU, the flash mob made the crowd dance on their feet. The crowd was filled with zeal.
- Manav Rachna Life Skill Programme under Literary Vertical organized the Poster Making Competition 'Expressions' at G block on the Topic of **Recent - Terror Attacks**. The competition brought overwhelming participation from the students of various departments.
- Orientation Programme 2k19 for the New Entrants of its Engineering courses, commenced with an auspicious Hawan ceremony on the very first day to invoke the blessings of Almighty. Manav Rachna University is poised to begin its journey, through the enrollments still coming in.
- During Talent Hunt for freshers on 19<sup>th</sup> July 2019 a music event based on western culture was conducted for the students of different branches. Various forms of western music like rapping, Bollywood and Hollywood songs were sung by the students. The dance events were also a huge success, where our students grooved to the mesmerising beats. The stage was all glittered by the talent of the freshers but the event took to another level when the faculty was asked to show their talents and be a part of the event. The program turned out to be a great introductory opportunity for the freshers to engage with other newcomers as well as the faculty. The post-noon session was dedicated to human values to drive the young minds towards a better life. In addition to this, the literary skills session acquainted the upcoming professionals and budding



minds with the power of possessing good communication and literary judgement, for success in all walks of life.

- Manav Rachna students and staff under the Literary vertical revisited the glory of India and showed gratitude and respect for being a Republican by celebrating the 70<sup>th</sup> Republic Day at MANCH. Republic Day the National Festival, commemorating the inception of “Constitution of India” is celebrated throughout the country with tremendous happiness and enthusiasm.
- Manav Rachna University under the literary vertical of Manav Rachna Life Skill Programme, organised a **Group Discussion** to commemorate the National Education Day as a mark of respect to Maulana Abul Kalam Azad. Maulana Abul Kalam Azad was a freedom fighter and independent India’s first Education Minister (served from 1947 to 1958). The topic for the same was “Are we on the right track on imparting quality education in Indian society?”
- Meena Kapahi (Department of Chemistry, Manav Rachna University) organised a Finger Puppet Making Session using waste papers with the students of Jagriti Sewa Trust (Regd) on 28<sup>th</sup> May 2019. The session was organised for nearly 50 students (up to class 5) as a part of the Summer Camp being organised free of cost at the evening coaching centre at Sector 16. The students participated with full enthusiasm and came up with some amazing creations.
- Keeping in mind the festival of lights and the resulting pollution thereafter, the Clan Air Falcons and the members of Paryavaran Club at MRU, organised a fun-filled anti-cracker awareness drive for the students of Jagriti Sewa Trust, Sector 16, Faridabad on 17<sup>th</sup> October 2019. The students were motivated to opt for a Green and a cracker free Diwali. Various competitions and fun filled activities were organised for the students.
- Department of Chemistry, Faculty of Applied Sciences, Manav Rachna University (MRU), Faridabad, organized a one-day visit to Indian Meteorological Department (IMD), Lodhi Road, New Delhi. A group of 15 students of B.Sc. Chemistry (Hons.) along with faculty coordinator Ms. Meena Kapahi visited different labs of IMD.
- Department of Management and Commerce, MRU organized an Industrial visit for BBA FAA semester II students to **Honda Cars Plant, Greater Noida** on 25<sup>th</sup> March 2019. Mr. Sunil Yadav, Senior Vice President, Corporate Affairs, Honda Cars spared some time from his busy schedule and interacted with the students.
- Department of Management and Commerce organized a session on “**Theatre and Communication**” for the students of BBA, MRU on February 25, 2019. The renowned theatre personalities Dr. M. Sayeed Alam and Ms Naina Sagar interacted with the students on various aspects of communication and the ways to improve one’s personality to enter into corporate world.
- Department of Management, MRU organized a Guest Lecture with the Professors and students of the department on the topic “Sustainable Development Goals” (SDGs)” with Mr. Roland

Schatz (CEO, MediaTenor and Senior Advisor to UN Secretary General) on November 24, 2018. Roland Schatz is the founder and CEO of Media Tenor International and he is the Senior Advisor to United Nations under Secretary General. He is also the founder of UNSGII Foundation.

- Department of Management & Commerce organized a workshop for Inno-Skill Program on “You Can Win: Creating Competitive Business Advantage” on 3<sup>rd</sup> April 2019.
- Department of Management and Commerce organised farewell on 30.3.19 for 6<sup>th</sup> Sem.



### 7.3 INSTITUTIONAL SOCIAL RESPONSIBILITY (ISR)

- Manav Rachna University carried out a donation drive in which Faculty members and students visited The Earth Saviours Foundation on 22-January-2019 and second time on 25-April-2019 and donated various articles such as woolens, blankets, clothing, stationary items, shoes, soap, food material etc.
- MRU Faculty members donated to Kerala Relief Fund for Kerala devastating flood disaster.
- MRU conducted “EK MUTTHI DAAN” drive in October 2018 with the theme “no one sleeps hungry”. In each of these drives all MRU Faculty members and students donated a total of about 1500 Kg of rice so as to make a little difference to the life of the underprivileged by donating just a handful of grains.
- MRU organized Blood Donation Camp on 12<sup>th</sup> September, 2018 in which both Faculty members and students donated blood
- MRU students and Faculty members visited the four adopted villages in July 2018 namely Anangpur, Ankhir, Pali and Mewla Maharajpur. They talked to villagers, understood their problems, infrastructure issues, coaching requirements for school children, sensitized villagers about importance of children education and later on conducted literacy programs in village schools.
- MRU conducted an E waste collection and disposal drive along with NAMO E Waste Management Ltd from 22nd -26th April, 2019. A documentary was made covering all aspects of FUN E WEEK, its implementation, collection and subsequent awareness among children. Students used electronic waste like batteries, motors, LED's etc. and made some wonderful projects displays. AMUSEMENT PARK, VARIOUS WIND MILL, WORKING ROBOT, DANCING DOLL, WATER ALARM etc.
- MRU students joined Jagriti Sewa Trust which is involved in teaching children from economically weaker sections of the society. Students spent their evenings with the students of 8th to 10th class and helped them with a number of modules in Science and Mathematics. Anti-cracker awareness drive was also organized for the students and were motivated to opt for a Green and a cracker free Diwali in 2018.
- Jeevandayini Social Foundation and Dr O P Bhalla Foundation organized a Bone Marrow/Stem Cell Donor Registration Drive in MRU campus on 12<sup>th</sup> September, 2018 in technical collaboration with GeneBandhu Blood Stem Cell Donor Registry.
- A week long Drug Abuse Prevention Programme was organized by the Faculty of Education under the aegis of National Institute of Social Defense, Ministry of Social Justice and Empowerment, Government of India from 16<sup>th</sup> March - 29<sup>th</sup> March 2019.
- A visit to National Association for Blind, R. K. Puram, Delhi was organized by the

Education Department on 24<sup>th</sup> January 2019 to sensitize future teachers by making them explore and learn strategies for education and skill development of visually impaired and blind children in order to bring them into the mainstream.

- Two days Capacity Building Workshop was organized by Dr. Babita Parashar and Dr. Seema Sharma on 24<sup>th</sup> and 25<sup>th</sup> May 2019.
- For making the young generation aware about the rights of women against sexual exploitation at the work place, a Josh Talk was organized by the Department of Education and Humanities on 13<sup>th</sup> March 2019. In the context of the students' involvement in Social Responsibility, B.Ed Semester II student Himanshu Jha has volunteered and taught from August 2018 to February 2019, in an NGO, Anubhav Ek Ahsaas working in the Education of children living in the slum areas of Surajkund village.
- Three of the B.Ed Semester I students namely Akshita Shukla, Bhawna Aggarwal and Jatin Kaushik participated and secured First, Second and Third place respectively in Essay writing Competition on the theme of 'Corruption Free India' organized by Indian Oil Corporation on 5<sup>th</sup> Nov 2018.
- B.Ed students participated in Pink Ribbon Art Festival conducted by Faridabad-based Sarvodaya Hospital & Research Centre and Department of Child Welfare, Haryana Govt. on 10<sup>th</sup> March 2019.
- Many of the Integrated BA. B.Ed Semester IV students volunteered in various NGOs and Schools working in the area of education and upliftment of children and adults from marginalized section of society during the month of June and July 2019. Names of NGOs and schools include the following : Sharad Foundation, Faridabad, Blooming Blossoms NGO, Faridabad, Roshni Vidya Mandir NGO, Faridabad, PRAYAS Juvenile Aid Home, New Delhi, Nidan NGO New Delhi, Tender Heart NGO Faridabad and TRS Public School, Noida.
- Students of Faculty of Law participated in the Legal Aid Camp, held in Faridpur, Faridabad, in the month of March 2019. The Legal Aid Camp was aimed at creating awareness relating to Lok Adalats and activities of District Legal Services Authority, Faridabad.

#### **7.4 ORIENTATION 2K18**

An Orientation Programme was organized to welcome the First Year Engineering, Sciences, Law, Education and Management students to the Manav Rachna family. The 3-week programme was conducted to accustom the students with the work culture at the University. The programme commenced with a havan ceremony to radiate positivity and pray for the student's progress in academics, achieving a bright future. The new entrants and their parents were welcomed and a presentation was exhibited, giving them glimpses of the galaxy of Manav Rachna Educational Institutions, the regulations and the academic philosophy of the Institution. To create a sense of belonging towards the University, an introduction

session of all the Deans, Director's, HODs, Faculties and Administrative staff was given to the new entrants.

As a unique blend of learning, fun and realization, the programme aimed at providing a smooth transition for the students into the new environment. Various bridge courses were run for the students to give them introductory knowledge about the departmental as well as interdisciplinary courses. Industrial talks were planned for the students where the Industry experts shared their technical expertise and the increasing Industry demand for good Engineers. In addition to this, alumni talks were organized who shared their experiential learning at Manav Rachna University and their journey thereafter. The Corporate Relations and Career Management Centre team briefed the students about their placement prospects. Various extra-curricular activities were planned for the holistic development of the new entrants. Literary, performing arts and sports activities were organized to develop a competitive spirit among the students. A concluding session was delivered by our Honourable Vice Chancellor, who motivated the students and enlightened them with the ethos of perseverance and self-belief. An Industrial visit was planned by all the departments so as to destine the students and motivate them for the same.

## **7.5 2<sup>nd</sup> CONVOCATION CEREMONY**

2nd Convocation of Manav Rachna University was organized on 19th March 2019. Padma Bhushan Shri D R Mehta graced the occasion as the Chief Guest of Convocation Ceremony. He is the former chairman of Securities and Exchange Board of India and the founder and chief patron of Bhagwan Mahaveer Viklang Sahayata Samiti the world's largest organization for the handicapped in terms of free fitment of artificial limbs/calipers etc. Shri Rakeysh Omprakash Mehra, renowned filmmaker and screenwriter was the Guest of Honor at the ceremony. Dr. Prashant Bhalla, President, Manav Rachna Educational Institutions shall preside over the function in the benign presence of Smt Satya Bhalla, Chief Patron, MREI. The convocation was declared open by Smt. Satya Bhalla. Dr. I K Bhat presented the Annual Report of MRU. Addressing the graduating students, he talked about the importance of ethics, loyalty and character building as the first step before entering into the professional world. The convocation memoir '#Pratibimb' was released at the ceremony. MRU also bestowed Honorary Doctorate Degrees in Philosophy upon Sh. Rakeysh Om Prakash Mehra and Sh. Daisaku Ikeda (in absentia). 386 meritorious students were awarded degrees. Special awards were instituted for exemplary performance across various genres. All the awardees for the special awards and medals were chosen through a well-structured process where all nominations were evaluated by a committee headed by Deans and Directors.

Ms. Yashika Hasija (Computer Science Engineering) received the Patron's Medal for her significant contribution to women in engineering. Ms. Akansha Ahuja (Computer Science Engineering) was awarded three medals: President's Medal, Outstanding Achiever's Award in Research, Outstanding Achiever's Award in Professional & Technical Development for her achievements at the International Level; Ms. Nishu Goel (B.Tech in Information Technology) was bestowed with the Vice President's Medal for her achievements in using technology for a better livelihood. Ms. Priyanka Tewatia (Mechanical) was awarded with the Vice Chancellor's Medal for her academic acumen. Mr. Divesh Popli (Electronics & Communication) was awarded with Student Leadership Award for displaying

outstanding leadership across academics, sports and other activities. Mr. Divyanshu Goyal (Computer Science Engineering) was announced as the 'Outstanding Achiever' in the field of community service. All stream toppers were awarded with academic proficiency medals.



## 7.6 ALUMNI NETWORK

MRU also has an Alumni Association to cater the needs to future students and establishing an everlasting relationship with our Alma matter. Manav Rachna Alumni Association organized a series of Alumni Events, Lectures for the current students during the year. Purpose of this interaction is to make the student aware of culture in the industries, options available to students after B Tech, latest technological trends/ upcoming technologies in the relevant streams and to motivate students about progressing from university life to professional life keeping hand in hand with the basic attributes of life which are time management and positive attitude.

### ALUMNI LECTURES

1. Department of CST organized an Alumni talk on “**Cyber Security**” on 23rd July, 2018. **Mr. Nishith Yadav**, an alumnus of CSE **2012-2016** batch was the key note speaker. Mr. Nishith Yadav is currently working as Cyber Security Analyst at Ernst & Young India LLP. He has worked with organizations like Deloitte Touche Tohmatsu India LLP, and his business domains include Advisory, Cyber security.
2. CST Department also organized an Alumni talk “**DevOps**” on 25th July, 2018. **Mr. Pranav Rishi**, an alumnus of CSE **2011-2015** batch was the key note speaker. Mr. Pranav Rishi is currently working as Software Engineer at Accenture. He has worked with organizations like WebNinjaz, Symphony Teleca and his business domains include E-Commerce, Energy and Power, and Telecommunication. He shared with the students about the new tools and trends in the area of “DevOps”. He emphasized on the benefits and disadvantages of some used tools over the other like Maven, Ant, GIT, Jenkins, Dockers etc.
3. The MRUAA organized an Executive Council Meet and General body meeting on 15th September, 2018. There were total 24 members present in the meeting including the Board Members of the Council. The Meeting started with a welcome to all members present there by Ms. Niharika Thakur, Secretary, MRCEAA. The members were then given a brief of what all Alumni Interactions/activities have been done in last one year along with the activities planned in near future. Some Important Agendas discussed in the meeting were:
  - Introducing new programs by all departments
  - Starting Alumni chapters by all Departments
  - Enhance the effectiveness of the Alumni Association
  - Creation of Career Mentor Program to help in placement of MRU products to enhance brand image of college.
  - Internships, Industrial visits, Lectures, Workshops for current batches by our Alumni
4. Department of ECE organized its 1st Alumni Meet 'RETRACE 2K18' on November 17, 2018. The involvement of alumni was created by organizing different games which made them remember their university life.
5. Department of ECE organized an Alumni Talk on "**High Level Synthesis**" on 25th January, 2019. **Mr. Rahul Sharma**, Alumni of batch 2013 – 2017 was the keynote speaker. He is

currently working with Mentor Graphics as a Tool and Verification Engineer. He discusses the important concepts of CMOS VLSI Design, designing using Verilog and System Verilog.

6. Department of ECE organized an Alumni Talk on "**Key to Success in Career**" on 30th January, 2019. **Mr. Prashant Gupta**, Alumni of batch 2011 – 2015 was the keynote speaker. He is currently working with Amazon.com as a Software Development Engineer in Seattle, Washington. He guided students on how to choose the career path and always remain dedicated and motivated to whatever they do in life.
7. CST Department organized an Alumni talk "**Internet of Things**" on 30th April, 2019. **Ms. Kirti Aggarwal**, an alumna of BTech CSE 2007-2011 Batch was the speaker. Ms. Kirti Aggarwal is currently associated with TCS as an ITA. She has worked with organizations like Reviving India as an Industry Expert. She holds hands-on experience in implementing projects and providing solutions of business applications on IoT platform. Her Business Domains include Banking and Financial Services. She told them about the fully programmed virtual assistant named "Jarvis" at Mark Zuckerberg's (CEO of Facebook) home.
8. The Department of Mechanical Engineering organized an Alumni Lecture on "**Overview of Fan industry in HVAC**" on 11th April 2019. The alumni lecture was given by **Mr. Chetan Dilawri**, an alumna of BTech ME 2012-2017 Batch appointed in sales & marketing division of Nicotra gebhardt-Noida (U.P).
9. Department of Management and Commerce organized an Alumni Lecture on "**Entrepreneurship Development**" on 1st March 2019. The lecture was delivered by **Mr. Anubhav Sukhija**, Alumni of MBA, MRCE [2013 – 2015]. During the same time Mr. Sukhija started his venture named as Cricket Gears. It is an e-commerce web portal where all Sports related customized good are available. Besides providing quality products to Indian market he is exporting his products to Australia, Canada & UK also. He is working over 16 Indian Market places at present.
10. Department of Mechanical Engineering organized an Alumni Lecture on "**Automobiles-industrial revolution**" on 22nd February 2019. The alumni lecture was given by **Ms. Kirti Virmani**, Alumni of B. Tech (ME), MRU [2014 – 2017] and presently she is working in Magneti Marelli India Pvt Ltd-Manesar (Gurgaon). She enlightened that industries are continuously working towards Hybrid vehicles and trying to achieve new pollution (BS-IV) norms.
11. Department of Mechanical Engineering organized a Lecture on "**Application of SAP in the industry**" on 25th January 2019. The lecture was given by **Mr. Shailesh Rathee**, Alumni of B. Tech (ME), MRU [2014 – 2018] appointed in JBM industry-Gurugram. The lecture focused mainly on latest developments in SAP software and its implementation part in JBM industry.
12. The Department of Mechanical Engineering organized Alumni Lecture on "**Application of Industrial Engineering**" on 24- SEPT 2018. The alumni lecture was given by **Mr. Arpit Ahuja**, HCL-NOIDA (Pass out student of MRCE- 2017). The lecture covered basics of industrial



engineering concepts including different related terms such as cycle time, break-even point and calculation of actual manpower etc.



## 7.7 VISITS TO INDUSTRIES AND EXHIBITIONS

1. Department of Management and Commerce (DMC) organized an Industrial visit for BBA FAA semester II students to Honda Cars Plant, Greater Noida on 25th March 2019. Mr. Sunil Yadav, Senior Vice President, Corporate Affairs, Honda Cars interacted with the students. Riddhima Aggarwal, Plant, HR briefed them about history, supplier network, CSIR initiatives. Green environmental friendly factory, skill development etc. initiatives taken by Honda Cars.
2. Department of Management and Commerce organized Industry Visit of BBA students to Yakult Danone Factory, Sonapat on 25th February 2019. Ms. Yamini, PR Executive, Yakult interacted with the students and shared the history and evolution of Yakult probiotic drink. She shared the Company Mission and Vision, Supply Chain Management, technology and research related Yakult drink.
3. First year students of BBA had a real luxurious experience with a true Indian flavor at The Raj Palace, a Grand Heritage Hotel, acknowledged as the world's best heritage hotel and also the member of small luxury hotels of the world. Students also visited Raj Bhawan, House of Governor Rajasthan.
4. Department of CST organized an Industrial Visit to Infosys Ltd., Chandigarh Development Centre for the First Year B.Tech CSE and ECE students with an aim to sensitize the students about the practical challenges that organizations face. Mr. Abhishek, Team member of ETA Dept. of Infosys, addressed the students on the topic "Current industry trends and demand".
5. Department of CST organized an Industrial Visit to Xebia, Gurgaon, for the First Year B.Tech CSE students on 23 August 2018. The objective of the visit was the interaction of students with Xebia's Technology Leaders and to apprise students about the era of specialization.
6. MSc Chemistry students visited to SVI Analytical, Gurugram on 26 December 2018 to enhance their practical knowledge on Analytical instruments.
7. A team of students and faculty coordinator **Meena Kapahi (Deptt. of Chemistry)** visited the **Earth Saviour Foundation**, an internationally recognised NGO, situated in Gurugram, Haryana on 22nd Jan 2019.
8. Faculty of Education, MRU organized visit to Mughal Garden on 26<sup>th</sup> Feb ' 2019 for B.Sc.B.Ed Students sem 2 and sem 4 and Pedagogy of Science students.
9. Visit to NCERT, New Delhi was organized for students of B Ed (2<sup>nd</sup> & 4<sup>th</sup> semester) with 4 faculty members (Dr Kiran Gupta, Dr Savita Sharma, Dr Seema Sharma, Ms Ridhi Khanna) in April 2019.
10. Faculty of Law organized students visit to Village Faridpur on 8<sup>th</sup> March '19 for organizing the legal aid and awareness camp.

## 7.8 GUEST LECTURES & WORKSHOPS BY EXPERTS

1. Department of Mathematics organized an expert lecture on “**Applications of Mathematics in Science & Technology**” on May 2, 2019, for the students of B.Sc. (H) and M.Sc. Mathematics by Dr. Khalil Ahmad, Professor – Department of Mathematics, AI – Falah University, Faridabad formerly.
2. Department of Mathematics organized an expert lecture on “**Scope for Mathematicians in field of Actuarial Sciences**” on March 1, 2019, for the students of B.Sc. (H) and M.Sc. Mathematics by Sh. Ashok Kumar Garg (Actuary) from General Insurance Corporation of India.
3. Department of Mathematics organized an invited lecture on “**Role of Mathematical Techniques in Medical Decision-Making Processes**”, on 25th January 2019 by Prof. (Dr.) Vijay Kumar, Head Department of Mathematics, MRIIRS.
4. Department of Mathematics organized an invited lecture on “**Fixed Point Theory – It’s Emergence, Scope & Applications in various fields**”, on 31st October 2018 by Dr. Pragati Gautam, Head – Department of Mathematics, Kamala Nehru College, University of Delhi.
5. Department of Management & Commerce, organized a Workshop with the Professors and students of the department with **Mr. Roland Schatz (CEO, Media Tenor and Senior Advisor to UN Secretary General)** on November 24, 2018. Roland Schatz is the founder and CEO of Media Tenor International and he is the Senior Advisor to United Nations under Secretary General. He is also the founder of UNSGII Foundation. The interaction was centered on the **17 SDG’s (Sustainable Development Goals)** given by the United Nations towards a fully sustainable planet in 2030.
6. Department of Management and Commerce, organized **Entrepreneur’s Summit** on 26th of April 2019 where 5 entrepreneurs were invited as guest speakers to inspire and narrate their entrepreneurial journey to students. Speakers that graced this occasion were Mr. Rajesh Setia (Founder and MD) from Testpan, Mr. Abhay Gupta from Luxury Connect LLP, Luxury Connect Business School & Luxury Cruxx. (Founder and CEO) a luxury retail expert, thought leader, brand leader, author & philanthropist, Ms. Shineel (Founder and MD) of “The house of artisans”, Mr. Himanshu Sehgal (An Manav Rachna University, Alumni) and founder of [www.myellowplate.com](http://www.myellowplate.com) (A travel and food enthusiast and blogger of international repute), Mr. Deepak Gaur also called as “Tree Man” whose life s mission is to plant millions of trees and make this world a better place.
7. Department of Management & Commerce conducted a workshop on the aspect of "**Creating Competitive Business Advantage**" by Mr.Amit Banerji Consultant in Strategic Marketing. The workshop was instrumental in honing the overall business & entrepreneurial skills of BBA students, with a specific objective of channelizing their respective aptitude towards fruitful endeavors. This was intended to prepare them for the business market & its peculiarities, in real world. It encompassed strategy formulation as well as its practical relevance towards a successful business model implementation. The Workshop was conducted by Mr Amit Banerjee (Industry Expert) & Dr

Manmeet Bali Nag (Deptt of Management & Commerce, MRU).

8. In the pursuit of honing the research acumen of Ph. D Research Scholars; The Department of Management & Commerce, conducted a specialized workshop under on “**How to Publish a Research Paper**” on 16th March 2019 by Prof. (Dr.) Y. K. Awasthi, from MRIIC.
9. Department of Management & Commerce organized a **Research Paper Writing** Workshop in order to provide impetus to Research activities in the Department by Prof (Dr.) B. S. Nagi in January 2019. He conducted an interactive session on Research Methodology and various tools used in Research.
10. **A five week long Women Entrepreneurship Development Program (WEDP), under the aegis of DST-NIMAT** funded scheme started in the campus on 25th Feb 2019 with an enrollment of 20 participants. Dr Bindu Agrawal, Chief Coordinator, MRIIC and Dr. Pragati Chauhan, Co-coordinator-WEDP & Associate Professor, Department of Management & Commerce organized this training wherein expert lectures of more than 40 resource persons in areas on Ideation and Evaluation, Business Modelling, Value proposition, Design thinking, Personal selling & process, Effectuation and Lean start-up, Patents & IPR, Questionnaire preparation and market survey and Preparation of Detailed Project Report.
11. Department of Management & Commerce organized a workshop for students of BBA (Entrepreneurship & Family Business) by **Dr. Sharad Kohli Founder & Chairman of KCC Group**. He is a dual CA from India and the UK and an alumnus of Harvard University. He talked about the rising ‘Start-up culture’, and the benefits that the government offers to business ideas under the ‘Start-up India Initiative’.
12. Department of Mechanical Engineering organised workshop on “**Introduction to 3D modelling and simulating on Ansys**” for 2017 & 2018 batch students on February 22, 2019.
13. Department of Mechanical Engineering organised workshop on “Introduction to SolidWorks” for 2018 batch students on March 8, 2019.
14. Department of Mechanical Engineering organised workshop organised on “Optimization technique through Matlab” for 2017 batch students on April 20, 2019.
15. Department of Mechanical Engineering organized a guest lecture on “Cutting Edge Technologies to address the challenges of the Future” by Dr. Amar Patnaik, Associate Dean External Affairs on 16 March 2019.
16. Department of Mechanical Engineering conducted a workshop on 3D printing which was delivered by Mr. Satyam Dixit, Assistant Manager, Design, APTRON Solutions Pvt. Ltd -Noida (U.P) on 16th April, 2019.
17. Department of Mechanical Engineering organized a half-day training program on “Energy

Conservation” in collaboration with Petroleum Conservation Research Association (PCRA), New Delhi for 35 participants along with 9 faculty members on 28th March 2019.

18. 25th January 2019, Department of Mechanical Engineering organised lecture on “Application of SAP in the industry” by Mr. Shailesh Rathee, JBM industry-Gurugram.
19. 28 March, 2019, mechanical engineering department is organised a half day training program on “Energy Conservation” in collaboration with PCRA
20. 11 October, 2018 Department of Mechanical Engineering organised workshop on "Air-Conditioning Technology" for MRU & MRIIS.
21. 29th September 2018, Department of Mechanical Engineering organised workshop on Introduction to VRV (Variable Refrigerant Volume) unit for the faculty of Mechanical Engineering Department.
22. July 2018, Department of Mechanical Engineering organised 4 workshops for SCCI India Pvt Ltd as a part of consultancy on “Introduction to IC Engine”. For approximate 80 participants.



## CHAPTER-8

### IQAC

#### 8.1 Faculty Development Programs

Based on the guidelines of National Assessment and Accreditation council, Manav Rachna University has constituted an Internal Quality Assurance Cell to take quality initiatives for improving the academic and administrative performance of the institution. Key objectives of IQAC include organization of activities relating to the enhancement of educational quality and development & application of quality parameters. IQAC cell is engaged in developing mechanisms for timely, efficient and progressive performance of the various academic and administrative units of the university. Under the Cell periodic academic review of the various departments are organized, which supports in taking specific quality improvement measure for further improvement. The Cell plays a key role in promoting a quality culture in the University. Faculty & Staff trainings, workshops and expert lectures are organized by the cell from time to time to train faculty and students for enhancing quality of education and student support services. In Academic Session 2018-19, various initiatives were taken by IQAC for the quality improvement.

| S.No. | Activity   | Facilitator / Speaker    | Organization             | Date                    |
|-------|--|--------------------------|--------------------------|-------------------------|
| 1     | STC on Optimization using MATLAB   | Prof.S.S.Dhami and team  | NITTTR Chandigarh        | 27/8/2018-1/09/2018     |
| 2     | Academic Review  | IQAC Internal audit team | MRU                      | 26/11/2018-5/12/2019    |
| 3     | "The aspects of bringing in synergy, re-imagining self for better productivity & inner peace". | Mr. Ranjan Chopra,       | CEO & MD, Team Computers | 3/28/2019               |
| 4.    | Machine health Monitoring and evaluation using IOT   | Prof. Lini Mathew        | NITTTR                   | 25/03/2019 - 29/03/2019 |
| 5.    | Expert talk on "Import of Research in Educational Institutions"                                | Prof.S.C.Dutta Roy       | IIT, Delhi               | 03/05/2019              |
| 6     | FDP on Teaching Pedagogies   | Prof.I.K.Bhat            | MRU                      | 13/03/2019-15/03/2019   |
| 7     | FDP on Teaching Pedagogies   | Prof.I.K.Bhat            | MRU                      | 03/06/2019-06/06/2019   |

|   |                            |               |     |                           |
|---|----------------------------|---------------|-----|---------------------------|
| 8 | FDP on Teaching Pedagogies | Prof.I.K.Bhat | MRU | 24/06/2019-<br>26/06/2019 |
| 9 | FDP on Teaching Pedagogies | Prof.I.K.Bhat | MRU | 02/07/2017-<br>04/07/2019 |

## 8.2 Public Lectures Series

Manav Rachna University started the Public Lectures series with an aim 'to sensitize and spread awareness among public on the issues of general public importance, to create vigilant and responsive citizenry, which is quintessential for a healthy society and strong democracy and to influence policy makers'. As the title suggests, the MRPL endeavors to provide a platform for an enlightened discourse and exchange of ideas amongst professionals, educationists, students and general public. Previous Lectures delivered are as under:

| S. No. | Name of the Speaker   | Title of the Lecture                            |
|--------|---|---|
| 1      | Ms. Suzanne Rab. Attorney from London, UK   | Data Protection in Education Sector             |
| 2      | Justice Mr. R. C. Lahoti, Former Chief Justice of India   | Role of Citizens in Nation Building             |
| 3      | Dr. Tanu Shree Singh, Psychologist and a famous author on Parenting   | Be Selfish -- Embrace Gratitude and Mindfulness |
| 4      | Dr. Sumant Gupta, Senior Consultant, Medical Oncology & Dr Shivam Vatsal, Consultant, Surgical Oncology, Sarvodaya Hospital & Research Centre | Cancer, Is it Lethal                            |







### 8.3 LEADERSHIP DEVELOPMENT SERIES

Under the mentor ship of our Hon'ble Padamshree Dr. Pritam Singh Jee, Hon. Director General, MREI, MRU started sessions for the senior functionaries under Leadership Series. Every year we organize sessions under this series.

Workshop was conducted by Ms. Deepika Chawla on 6<sup>th</sup> September 2018 on Teams & Leadership. Ms. Chawla is Vice President in a Fortune 100 company having 24+ years of rich and diverse work experience in Financial Shared Services and Banking Industry. She is a Qualified Chartered Accountant. She is a TEDx speaker, supports multiple NGO's of Cancer, Education & Thalassemia.

- Another workshop on “Role Of Accent, Intonation and Personality Grooming in Professional Life was conducted by renowned accent and personality grooming expert Ms. Sabira Merchant on November 22, 2018. The objective of the workshop was to apprise participants the various aspects of accent which included speed, volume, clarity, enunciation, pronunciation, and use of articles among many others. She said, “Your tone should always be well-modulated”. Body language and vocabulary were some of the aspects she touched upon. She also talked about ‘Global Corporate Dressing’ which kept everyone intact.
- An expert talk was conducted on the topic "**The aspects of bringing in synergy, re-imagining self for better productivity & inner peace**" on 28th March 2019 by Mr. Ranjan Chopra, CEO & MD, Team Computers. He is a passionate Entrepreneur, in Hospitality & fine Dining. He has his own restaurants. He has contributed to society through various NGOs like Aarogya Seva through 3D printed prosthetics, Friendicoes for Animal Welfare, Sarthak , which works for differently able people and the The Earth Saviour Foundation which helps and takes care for the Elderly & Underprivileged.

### 8.4 SWAYAM -NPTEL

MRU SWAYAM -NPTEL Local Chapter has been declared as "Active Local Chapter" for July-Oct, 2018 session based on its participation and performance (National Toppers, Elite Gold, Elite Certificates etc). In Even semester Jan-April 2019, Manav Rachna University SWAYAM-NPTEL Local Chapter has been declared as one of the top 100 Local Chapters of India in Local Chapter Rankings of SWAYAM- NPTEL, Jan-April 2019 session. The MRU Local chapter has got 92nd rank In India and 2nd Rank in Haryana with 17 National Toppers, 19 Gold, 52 Silver, 111 Elite and 156 successfully completed certificates (Total 338 certificates).

The MOOCs enrollment and certification details in odd semester July-December 2018 are as under:

| S. No. | Details   | Numbers |
|--------|---|---------|
| 1      | Total Enrollments                                     | 836     |
| 2      | Total Exam registrations                              | 112     |
| 3      | Total Candidates Appeared                             | 96      |
| 4      | Total number of students appeared for Credit Transfer | 42      |

A large number of students and faculty members have achieved **National Topper Positions, Elite- Gold, Elite**, and **successfully completed** certificates. The details are as follows

| Certificate Category          | No. Students | of No. Faculty | of Total |
|-------------------------------|--------------|----------------|----------|
| <b>National Topper</b>        | 6            | 4              | 10       |
| <b>Elite Gold</b>             |              |                |          |
| <b>Elite</b>                  | 26           | 22             | 48       |
| <b>Elite+Gold</b>             | 5            | 1              | 6        |
| <b>Successfully Completed</b> | 16           | 11             | 27       |
| <b>No Certificate</b>         | 13           | 2              | 15       |
| <b>Total</b>                  | 60           | 36             | 96       |

The faculty and students national toppers details are as follows:

| SNo | Faculty Toppers            | Deptt | MOOC                                   |
|-----|----------------------------|-------|--|
| 1   | Dr. AKHILESH KUMAR DWIVEDI | HUM   | Developing Soft Skills and Personality |
| 2   | Ms. Manvi Bareja           | CST   | Social Networks                        |
| 3   | Ms. Shiny Bhardwaj         | EDU   | Developing Soft Skills and Personality |
| 4   | Ms. Rinky Yadav            | ME    | Manufacturing of Composites            |

| SNo | Student Toppers | Deptt | MOOC                                   |
|-----|-----------------|-------|--|
| 1   | SHUBHAM SOOD    | CST   | Joy of Computing using Python          |
| 2   | AKASH CHAUHAN   | EDU   | Developing Soft Skills and Personality |
| 3   | AKSHITA SHUKLA  | EDU   | Developing Soft Skills and Personality |
| 4   | NEHA RANA       | EDU   | Developing Soft Skills and Personality |
| 5   | AKSHARA SHARMA  | EDU   | Developing Soft Skills and Personality |
| 6   | JATIN KAUSHIK   | EDU   | Developing Soft Skills and Personality |

**The MOOCs enrollment and certification for the session Jan-June 2019 are as under:**

|   |       |
|---|-------|
| Total Enrollments                                     | 1,116 |
| Total Exam registrations                              | 368   |
| Total number of students appeared for Credit Transfer | 241   |

**A large number of students and faculty members have achieved National Topper Positions, Elite- Gold, Elite, and successfully completed certificates. The details are as follows**

| Certificate Category   | No. of Students | No. of Faculty |
|------------------------|-----------------|----------------|
| <b>National Topper</b> | <b>13</b>       | <b>3</b>       |
| Elite                  | 94              | 7              |
| Elite+Gold             | 18              | 1              |
| Elite+Silver           | 41              | 11             |
| Successfully Completed | 150             | 6              |

**The faculty and students national toppers details are shown below:**

| S. No | Name                   | Course Name                               | Department | Certificate Type | Topper       |
|-------|------------------------|---|------------|------------------|--------------|
| 1     | AKHILESH KUMAR DWIVEDI | Enhancing Soft Skills and Personality     | EDU        | Elite+gold       | Topper of 5% |
| 2     | JOGINDER SINGH         | Introduction To Composites                | ME         | Elite+Silver     | Topper of 2% |
| 3     | ADITYA DHAWAN          | Foundation Course in Managerial Economics | LAW        | Elite            | Topper of 5% |
| 4     | Savita Sharma          | Emotional Intelligence                    | EDU        | Elite+gold       | Topper of 2% |

| S. No | Student Topper | Course Name                   | Department | Certificate Type | Topper                      |
|-------|----------------|-------------------------------|------------|------------------|-----------------------------|
| 1     | ADITI GUPTA    | Joy of computing using Python | CST        | Elite+gold       | Topper of 5% in this course |
| 2     | ARUN KUMAR     | Principles Of Human Resource  | CST        | Elite+Silver     | Topper of 5% in this course |

|    |                    |  |     |              |                             |
|----|--------------------|--|-----|--------------|-----------------------------|
|    |                    | Management   |     |              |                             |
| 3  | AKSHAY KUMAR       | Better Spoken English                                    | EDU | Elite+Silver | Topper of 5% in this course |
| 4  | AKSHITA SHUKLA     | Language And Mind  | EDU | Elite+Silver | Topper of this course       |
| 5  | ANKIT TALWAR       | Programming in Java                                      | CST | Elite+gold   | Topper of 5% in this course |
| 6  | AYUSHI MAURYA      | Principles Of Human Resource Management                  | ECE | Elite+Silver | Topper of 1% in this course |
| 7  | RAHUL THAKUR       | Programming, Data Structures and Algorithms using Python | CST | Elite+Silver | Topper of 5% in this course |
| 8  | CHIRAG WALECHA     | Joy of computing using Python                            | CST | Elite+gold   | Topper of 2% in this course |
| 9  | HARSHITA CHAURASIA | Better Spoken English                                    | EDU | Elite+Silver | Topper of 5% in this course |
| 10 | HIMANI RAWAT       | Principles of Human Resource Management                  | EDU | Elite+Silver | Topper of 1% in this course |
| 11 | LAKSHYA MITTAL     | Programming, Data Structures and Algorithms using Python | CST | Elite+gold   | Topper of 2% in this course |
| 12 | VARUN PRAKASH      | Joy of computing using Python                            | CST | Elite+gold   | Topper of 5% in this course |
| 13 | SUMEET CHANDEL     | Joy of computing using Python                            | CST | Elite+gold   | Topper of 1% in this course |

Also, **Being** National Topper (Top 5%) in "Joy of computing using Python" (NPTEL MOOC course) in Jan-April 2019 session, **Aditi Gupta, BTech CSE (2015-2019 Batch)** has got an **internship for 6 weeks at IIT Ropar** with a stipend of Rs. 10,000 per month. She worked in the field of "Sentiment Analysis" at IIT Ropar from 1<sup>st</sup> June –15<sup>th</sup> July 2019.

### 8.5 VIRTUAL LABS

**Manav Rachna University has been declared Nodal Centre for Virtual Labs, in association with IIT, Delhi. The Inauguration for the same took place on 10th April, 2018. The Virtual Labs is a project initiated by the MHRD, Govt. of India, under the National Mission on Education through Information and Communication Technology (ICT). The project aims to provide remote-access to Laboratories in various disciplines of science and engineering for students at all levels from undergraduate to research. The virtual labs are fully interactive simulations in which include animations,**

illustrations and videos where experiments, collect data and answer questions to assess their understanding.

A Workshop was organized by the Virtual Lab Nodal Coordinator, Dr. Mrinal Pandey & her team members. The Team from IIT, Delhi conducted this Virtual Lab Workshop in 6 sessions with hands on practices. The workshop was a great success wherein more than 150 students and faculty members from various discipline participated with full enthusiasm.

**Semester wise Virtual Labs usage as as below:**

**(July 2018 – Dec 2018)**

| Department                                   | No. of students | No. of Virtual labs performed | No. of experiments | No. of students x No. of Virtual labs performed x No. of experiments |
|--|-----------------|-------------------------------|--------------------|--|
| CSE (1 <sup>st</sup> Sem)                    | 180             | 3                             | 10                 | 5400   |
| ECE-(1 <sup>st</sup> Sem)                    | 5               | 4                             | 4                  | 80   |
| ME-(3 <sup>rd</sup> Sem+5 <sup>th</sup> Sem) | 106             | 3                             | 17                 | 5406   |
| Physics (CSE-1 <sup>st</sup> Sem)            | 101             | 4                             | 7                  | 2828   |
| Chemistry(CSE-1 <sup>st</sup> Sem)           | 101             | 9                             | 10                 | 9090   |
| Workshop by IIT,Delhi                        | 200             | 9                             | 4                  | 7200   |
| Total usage                                  |                 |                               |                    | 30,004   |

**(Jan 2019 – Jun 2019)**

| Department                     | No. of students | No. of Virtual labs performed | No. of Experiments | No. of students x No. of Virtual labs performed x No. of experiments |
|--------------------------------|-----------------|-------------------------------|--------------------|--|
| ECE(2 <sup>nd</sup> sem)       | 26              | 6                             | 12                 | 1872   |
| ME (2 <sup>nd</sup> sem)       | 50              | 6                             | 12                 | 3600   |
| Physics(2 <sup>nd</sup> sem)   | 120             | 05                            | 08                 | 4800   |
| Chemistry(2 <sup>nd</sup> sem) | 101             | 4                             | 08                 | 3232   |
| Workshop by IIT,Delhi          | 200             | 6                             | 04                 | 4800   |
| Total usage                    |                 |                               |                    | 18304  |

**Number of Virtual Labs Experiments Performed: 44**

## CHAPTER-9

# ENGINEERING EXPLORATION

Manav Rachna University conducted a one semester course on Engineering Exploration (January-May 2019) followed by Project Expo on 21<sup>st</sup> June 2019 to display the projects made by B.Tech 1<sup>st</sup> year students (Computer Science and Engineering, Mechanical Engineering & Electronics and Computer Engineering). This course focused on Engineering Design, Mechanisms, Platform Based Development, Data Acquisition and Analysis, Project Management, Sustainability and Ethics. It followed Project Based Learning Pedagogy.

For the entire semester, students have undergone intensive training on various aspects of project development like problem solving, software and hardware interface, report writing etc. and finally developed projects in teams. It was indeed a remarkable moment that the 1<sup>st</sup> year displayed their projects right in 1<sup>st</sup> year. A total of 32 projects by 210 B.Tech 1<sup>st</sup> year students were exhibited. Out of these 32 projects, top 10 projects were selected. These 10 project teams were invited to defend their innovation in front of around 120 faculties and students. Among these 10 team, 4 teams (Top 3 and 1 jury choice) were finally selected and prizes were distributed accordingly. The exhibition was judged by Dr. B.S. Gill Director MRIIC, Mr. Nikhil Dalmia, Techno Planet Labs and Dr. Abhiruchi Passi HoD ECE MRIIRS.

The list of dignitaries who visited the exhibition includes Honorable Vice Chancellor of MRU Prof. I.K. Bhat, Dr. Sangita Banga Dean Academics, Dr. Pradeep Varshney Dean Research and other faculties, Staff and Students of Manav Rachna University.



## **CHAPTER-10**

### **NEW INITIATIVES TAKEN**

#### **10.1 Active learning Process:**

Active learning engages students in learning, using activities such as reading, writing, discussion, or problem solving, which promote analysis, synthesis, and evaluation of class content. Active in-class learning also provides students with informal opportunities for feedback on how well they understood the material. MRU promotes active learning via various methods the most effective one is Project Based Learning where-in faculty-student teams are formulated. Department of CST operates Research Computing Cluster wherein students work on problem areas based on applications built on fundamental theory and methods in computing science which encourages Research and Innovation culture. Some of the focus areas being executed at Research Cluster are Machine Learning, Web/Mobile App Development, Cyber Security etc. Department of ECE started an initiative to expose students to the Synergizing Initiatives of CPSEs, Govt. Agencies and Industry Champions on Startups. Students participated in the event held on 14<sup>th</sup> and 15<sup>th</sup> February, 2019 in SCOPE Complex, Lodhi Road, New Delhi- 110003. Big and small industrialists shared their views and opinions regarding various ventures and startups. These talks exposed students to the new and emerging trends in the field of Electronics and Communication.

Departments have also formulated 'Review Committee for Advanced Learners' to assess the students who approach for exemption from routine classes, to work on projects or pursue assignments beyond the university curriculum. Based on academic performance and their achievements in past, the committee decides to exempt the student from labs/workshops so that they can devote more time for the projects etc. After evaluating the academic record and project work carried out by the student, the committee proposes the exemption to the students with the following conditions:

- a. Students will regularly attend the labs offered by other departments.
- b. Students will maintain 75% and above attendance for Lecture and Tutorial classes and will submit assignments of every lab on time.
- c. They will appear for lab evaluation (PT) exam.

**The exemption is revoked if the students fail to maintain the above-mentioned conditions.**

#### **10.2 Legal Aid Camp**

Students of Faculty of Law participated in the Legal Aid Camp, held in Faridpur, Faridabad, in the month of March 2019. Article 39(A) of the Indian Constitution makes provision for providing free legal aid to the poor and weaker sections of the society and ensures justice for all. Legal aid camps are aimed at achieving the said goal. The Legal Aid Camp was aimed at creating awareness relating to Lok Adalats and activities of District Legal Services Authority, Faridabad.



### 10.3 Expert Lecture Series

Faculty of Law, Manav Rachna University, launched the Expert Lecture Series on Law with the commemoration of 69<sup>th</sup> Law Day on 26<sup>th</sup> November, 2018. Sr. Adv. Mr. Arvind P. Datar, delivered the inaugural Manav Rachna Expert Lectures on Law (ELL) and set the Gold standard for future talks in the series. The purpose of ELL is to provide a forum and opportunity to the students to listen to the legal stalwarts and get to interact with them. Formal gatherings and informal interactions of students with speakers help student know and appreciate new perspectives on the issues of public and contemporary importance. These Lectures serve to enrich and inspired the students and faculty alike to endeavour towards imbibing the values enshrined in our legal system. Second ELL in the series was delivered by Justice Kurian Joseph, former Judge Supreme Court of India and third by Justice Rajiv Sahai Endlaw, sitting Judge, Delhi High Court





#### 10.4 MANAV RACHNA EXCELLENCE AWARD

The third edition of Manav Rachna Excellence Awards (MREA) 2019 was held at a glittering ceremony graced by Dr. D P Singh, Chairman, University Grants Commission at the campus of Manav Rachna Educational Institutions (MREI). Manav Rachna Excellence Awards, organized annually were instituted in April 2017 to carry forward the rich legacy of its visionary founder Dr. O P Bhalla who worked ceaselessly to promote quality education.



MREA 2019 were bestowed across eleven genres to stalwarts and achievers for their exceptional and path-breaking vision by Sh. D P Singh in the presence of Smt. Satya Bhalla, Chief Patron, MREI; Dr. Prashant Bhalla, President, MREI; Dr. Amit Bhalla, VP, MREI; Dr. Sanjay Srivastava, MD, MREI; Dr. N C Wadhwa, DG, MREI; Padma Shri Dr. Pritam Singh, DG, MREI; Mr P Dwarkanath, Ex-Director HR, GSK; Mr. H K Batra, Chairman, Perfect Breads; Mr. Ravi Vasudeva and veterans from the industry.

The stalwarts who were honored on this prestigious platform are revered figures:

| MANAV RACHNA EXCELLENCE AWARD – 2019 |   |  |
|--------------------------------------|---|--|
| S.No.                                | Category Name                                   | Name of the Person   |
| 1                                    | Special Achiever Award<br><b>Team Caeli (6)</b> | Ms. Aashlesha Sharma<br>1. Mr. Akash Bhadana<br>2. Mr. Vasu Kaushik<br>3. Mr. Bharat Sundal<br>4. Mr. Dipesh Narwat<br>5. Mr. Ishlok Vashistha &<br>6. Mr. Umesh Dutta |
| 2                                    | Alumni Award                                    | Mr. Roopam Sharma – FRSA,<br>Ms. Abhilasha Sharma, IAS   |
| 3                                    | Sports Icon Award                               | Ms. Deepa Malik  |
| 4                                    | Young Leader Award                              | Mr. Anurag Batra – Chairman & Editor in Chief-Business World   |
| 5                                    | People Builder Award                            | Mr. Harbhajan Singh – Director General & Corporate Affairs at<br>HMSI Pvt. Ltd.  |
| 6                                    | Global Thought Leader Award                     | Mr. David Coleman – President & CEO, Collage Board, USA  |
| 7                                    | Corporate & Industry Award                      | Mr. Kanwal Jeet Jawa – CEO & MD Daikin India   |
| 8                                    | Change Maestro Award                            | Dr. Anil Sahasrabudhe-Chairman, AICTE  |
| 9                                    | Nation Building Award                           | Mr. Atul Sobti – Chairman & MD, BHEL   |
| 10                                   | Faridabad Industry Icon Award                   | Mr. K. C. Lakhani- Chairman, Lakhani Armaan Group  |
| 11                                   | Lifetime Achievement Award                      | Mr. M. Damodaran – Ex-Chairman, SEBI/UTI   |



# MANAV RACHNA MAKING NEWS



## Manav Rachna contributes in Haryana's Largest Plantation Drive

On the solemn occasion of World Nature Conservation Day, Sh. Manohar Lal Khattar, Hon'ble Chief Minister - Haryana addressed the public of Faridabad during the Mega Plantation Drive and Art Festival organized by Faridabad Navchetna Trust. Dr. Prashant Bhalla, President, Manav Rachna Educational Institutions is also the president of FNT. Also, over 1 crore seeds were dispersed in the ecosystem of Aravali Hills. More than 2.5 lakhs saplings of herbal, medicinal and floral properties were also distributed over a month at various religious places in the form of Prasad for a better tomorrow.

## Hand in Hand with the Standards set by GOI

Manav Rachna University SWAYAM - NPTEL Local Chapter has been recognized as a valuable Local Chapter with a rating 'A' based on the remarkable performance in Jan - April 2019 session. SWAYAM is a program initiated by the Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity, and quality. The objective of this effort is to take the best teaching - learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy.



## Led by the Stalwarts of Industry

Prof. Jaideep Singh, Director Industry Interaction, has been awarded the 100 Most Dedicated Professors Award in the category: Industry-Academia interface recently. The award ceremony was organized by 'WORLD EDUCATION CONGRESS'. A galaxy of educationists and corporate professionals were a part of this ceremony. The recipients for the award were chosen from the universities across India and only the best five nominations in each category were recognized.



Hello Freshers

## Time to thrive, Its College Life

Manav Rachna commenced its three-week Orientation Program for the students of batch 2019-20. The program is systematically designed to introduce students to the 'Manav Rachna' way of life, its outstanding pedagogy and state-of-the-art facilities.



## मानव रचना यूनिवर्सिटी और आल्टेयर इंजीनियरिंग एवं डिजाइनटेक लिमिटेड के बीच एमओयू साइन

किशोर शर्मा/पुढुगांव मेल  
फरीदाबाद, 27 मई। मानव रचना विश्वविद्यालय और यूएस की जानी-मानी कंपनी आल्टेयर इंजीनियरिंग एवं डिजाइनटेक लिमिटेड के बीच एमओयू साइन किया गया। आल्टेयर इंजीनियरिंग और डिजाइनटेक लिमिटेड को और कैम्पस में छात्रों के लिए एक्सिलेंस सेंटर स्थापित किया जाएगा। इंजीनियरिंग के अलग-अलग कोर्सिस में पढ़ने वाले छात्र इसका लाभ उठा सकेंगे। इस एक्सिलेंस सेंटर के अंतर्गत लैब क्लासिस, ज्वैट रिसेर्च प्रोजेक्ट्स, शॉर्ट टर्म प्रोग्राम, आल्टेयर इंजीनियरिंग के नए कर्मचारियों के



इंडक्शन कार्यक्रम जैसे कार्य किए जाएंगे। इस दौरान मानव रचना यूनिवर्सिटी के सीओ डॉ. आर्कि भट्ट ने कहा बताया, मानव रचना रचनात्मक विकास में विश्वास रखता है। नए एक्सिलेंस सेंटर को स्थापना से इसे और बढ़ावा

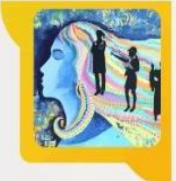
मिलेगा। उन्होंने बताया, कोर्स का पाठ्यक्रम प्रारूप इंस्ट्रुट्री और आल्टेयर इंजीनियरिंग का यह पहला एक्सिलेंस सेंटर है जिसको स्थापना मानव रचना विश्वविद्यालय के कैम्पस में की गई

## MoU with Altair Engineering to establish a Centre of Excellence

US based Altair Engineering (NASDAQ:ALTR) and its Indian execution partner DesignTech Systems Ltd. signed a tri-party MoU with Manav Rachna University. The MoU entails setting up of a Centre of Excellence (CoE) with world-class infrastructure to work on CAE related projects. The tie-up will benefit students by inculcating research and innovation skills through simulation technologies using the Altair suite of advanced software solutions.



## KALAKRITI AUR HUNAR KA SAMAGAM



The Pink Ribbon Art Festival by Sarvodaya Hospital to empower women and womanhood in all its glory turned the campus of Manav Rachna all pink. 1000 participants of age groups from 3 years to 40 years painted their thoughts on five different categories: My Mother My Super Hero, Educate Women Educate Nation, Woman Who Inspires Me The Most, One Woman Many Lives and I Deserve To Be Myself.



Team XCODERS of B.Tech Computer Science & Engineering, Manav Rachna University, Faridabad is the winner of SMART INDIA HACKATHON 2019 under Software Category. Team XCODERS won the prize money of Rs. 50,000 and a trophy.

### RAISING THE 'BAR' FOR FUTURE LEGAL REPRESENTATIVES



An expert talk by Justice Kurian Joseph was organized by the Faculty of Law, Manav Rachna University on Alternative Dispute Resolution (ADR). Justice Kurian has retired as the judge of the Supreme Court of India. A gentleman judge, he is well-liked both by the bar and the bench for his amiable manners and sensitive approach to law.

**Carrying forward Manav Rachna's mantle of excellence!**

Roopam Sharma FRSA, an engineering alumnus from Manav Rachna University has been featured in Foreign Policy's 100 Global Thinkers List alongside Bill Gates, Mukesh Ambani, Baba Ramdev and is the youngest person on the list. He is a recipient of several recognitions for his social innovation 'Manovue', which is the world's first intelligent personal assisting system for the visually impaired.



**तीसरे मानव रचना उत्कृष्टता सम्मान-2019 का आयोजन**  
 फरीदाबाद। मानव रचना शैक्षणिक संस्थान में तीसरे मानव रचना उत्कृष्टता सम्मान 2019 का आयोजन किया गया। यह कार्यक्रम हर साल मानव रचना संस्थापक डॉ. ओपी भल्ला को याद में मनाए जाते हैं। कार्यक्रम में यूनिवर्सिटी ऑफ कॅम्ब्रिज के चेयरमैन प्रोफेसर डीपी सिंह ने बतौर मुख्य अतिथि हिस्सा लिया। अलग-अलग क्षेत्रों में बेहतरीन कार्य करने वाले लोगों को इन अवार्ड्स से सम्मानित किया जाता है। इस बार मानव रचना के पूर्व छात्र और विद्यार्थियों में मानव रचना का इम्पैक्ट लहराने वाले छात्रों को भी सम्मानित किया गया।  
 कार्यक्रम में प्रोफेसर डीपी सिंह ने कहा कि डॉ. ओपी भल्ला को याद कर कहा कि उन्होंने मानव रचना का नाम रोचक कर रखा था। उन्होंने इस बात कि खुशी जताई कि मानव रचना युवाओं को चले चला दिख रहा है, जो कि राष्ट्र निर्माण का जर्न है। उन्होंने यह भी कहा कि जिस तरह मानव रचना ने आज के छात्रों को सम्मानित किया है उस तरह सभी शैक्षणिक संस्थानों को करना चाहिए।

**800+ students from schools and institutions across Delhi NCR present their innovations at the Annual Technical Fest 'INNOSKILL 2018'.**

**The year 2018 established Manav Rachna among the league of the World's best with: QS I-Gauge Gold Rating for Manav Rachna University**

**'National Convention on Higher Education' hosted at Manav Rachna was presided over by Dr Satyapal Singh, Hon'ble MoS for HRD (higher education).**

## खिलाड़ियों की पहली पसंद बनी मानव रचना स्पोर्ट्स एकेडमी

### इंटरनेशनल लेबल पर प्रतिभा का लोहा मनवा रहे खिलाड़ी

हरिद्वार न्यूज़ | फरीदाबाद

उच्च स्तरीय आधुनिक सुविधाओं से युक्त मानव रचना स्पोर्ट्स एकेडमी देश के खिलाड़ियों की पहली पसंद बनती जा रही है। एकेडमी में प्रशिक्षण प्राप्त खिलाड़ी अब इंटरनेशनल लेबल पर अपनी प्रतिभा का लोहा मनवा कर न सिर्फ पदक ही हासिल कर रहे हैं बल्कि एकेडमी व देश का नाम भी रोशन कर रहे हैं। सेंट्रल ऑफ एक्सीलेंस का राजस्थान, उत्तर प्रदेश, पंजाब, जम्मू-कश्मीर, हिमाचल, मध्य

प्रदेश, मिजोरम, बिहार, असम, मणिपुर के अलावा नॉर्थ-ईस्ट के खिलाड़ी पहली पसंद के रूप में देखते हैं। आस्ट्रेलिया में सम्पन्न कॉमनवेल्थ गेम में भी एकेडमी के दो स्टार्स ने पदक हासिल किए हैं। इसके अलावा इंटरनेशनल शूटिंग फेडरेशन ने भी यहाँ की शूटिंग रेंज को पहले ट्रेनिंग सेंटर की मान्यता दी है। गौरतलब है कि मानव रचना शिक्षण संस्थान के संस्थापक डा. ओ.पी. भल्ला ने आधुनिक उच्च शिक्षा के साथ-साथ विद्यार्थियों में स्पोर्ट्स कलचर डवलप करने की सोच के तहत मानव रचना स्पोर्ट्स एकेडमी की स्थापना की और सेंटर ऑफ एक्सीलेंस प्रोग्राम चलाया।

## भूजल स्तर सुधारने में निगम की मदद करेगा एमआर संस्थान

### सेंटर फॉर एडवांस वॉटर टेक्नॉलॉजी करेगा रनवॉटर हार्वेस्टिंग सिस्टम विकसित

जैसे, फरीदाबाद : शहर में जलभरव की समस्या के समाधान के लिए अब नगर निगम और मानव रचना शिक्षण संस्थान मिलकर काम करेंगे। जलभरव की समस्या से लोगों को निजात दिलाने के लिए अब मानव रचना इंटरनेशनल इंस्टीट्यूट ऑफ रिसर्च एंड स्टडीज के सेंटर फॉर एडवांस वॉटर टेक्नॉलॉजी एंड मैनेजमेंट के छात्र अहम भूमिका निभाएंगे। इस सेंटर की ओर से नगर निगम को पत्र भेजा गया है। अगर सब कुछ ठीक-ठाक रहा तो शहरवासियों को जलभरव से छुटकारा मिल जाएगा, तो भूजल स्तर में भी सुधार होगा। निगमायुक्त अनिता खन्ना की ओर से इस प्रोजेक्ट पर सहमति बनने के बाद सेंटर फॉर एडवांस वॉटर टेक्नॉलॉजी एंड मैनेजमेंट की ओर से मिशन बंद शुरू किया जाएगा। बता दें कि नगर निगम में जलभरव की बढ़ती समस्या है। कई जगह निकासी का इंतजाम नहीं है। प्रमुख चौक-चौराहों पर जरा सी बारिश के बाद जलभरव की समस्या पैदा हो जाती है। इसका मुख्य कारण घरवासी पानी निकासी की व्यवस्था न होना है। ओड्ड फरीदाबाद, बल्लभगढ़, बड़खल क्षेत्र में कई जगह जलभरव होता है। ऐसे ही सेंटर 15, 16, 17, 18, 19 में भी जलभरव हो जाता है। एनआईटी की कई कर्मीयों में जलभरव परेशानी का कारण बन जाते हैं। भूजल स्तर में सुधार के लिए ही नगर निगम और मानव रचना इंटरनेशनल इंस्टीट्यूट ऑफ रिसर्च एंड स्टडीज बेतार करने की तैयारी में हैं।

नगर निगम मानव रचना संस्थान के छात्रों को रिसर्च के लिए पुरस्कार देना। यह अवसर है कि नगर रचना अपने पत्र के लिए आगे आया है। रिसर्च के लिए 6.50 के अंके पर निगमवृत्त की मजूरी मिलने के बाद काम शुरू किया जाएगा।

**डी.आर.ता भल्ला, अध्यक्ष, मानव रचना शिक्षण संस्थान**

| Manav Rachna University, Faridabad   |   |                 |   |  |  |                            |
|--|---|-----------------|---|--|--|----------------------------|
| Books /Chapters /Monograph/Case Study authored by Faculty Members for last 5 years |   |                 |   |  |  |                            |
| S. No.   | Name of Faculty Members                                   | Department Name | Type of publication<br>1. Book<br>2. Chapter<br>3. Monograph<br>4. Case study | Name of the Book / Chapter / Monograph   | ISBN Number  | Year of Publication (yyyy) |
| 1  | Aparna Vyas   | Mathematics     | Book  | Non-MSF Wavelets   | 978-620-0-10318-5                                      | 2019                       |
| 2  | Shiv Kumar Dixit  | Physics         | Chapter   | The Physics of Semiconductor Devices   | 978-3-319-97604-4                                      | 2019                       |
| 3  | Dr. Versha Vahini   | Law             | Book Chapter  | Triple Talak - Judgment, Legislation and Beyond  |  | 2019                       |
| 4  | Arpit Sand  | Chemistry       | Book  | Graft copolymerization and Polysaccharides<br>Graftcopol ymerization and Polysaccharides | 978-613-9-97543-3                                      | 2018                       |
| 5  | Dr. Jyoti Pruthi  | CST             | Book Chapter  | Smart Trends in Information Technology & Computer Communication                          | 978-981-10-3433-6                                      | 2018                       |
| 6  | Shilpa Sharma, Amita Dua and Amita Malik                  | Chemistry       | Book  | Polyaspartic acid based superabsorbent polymers  | 978-620-2-00752-8                                      | 2018                       |
| 7  | Aparna Vyas, Soohwan Yu, Joonki Paik                      | Mathematics     | Book  | Multiscale Transforms with Application to Image Processing                               | 978-981-10-7272-7<br>Hardcover ISBN: 978-981-10-7271-0 | 2018                       |
| 8  | Hardeo Kumar Thakur, Anand Gupta, Anshul Garg, Disha Garg | CST             | Book Chapter  | Periodic Patterns in Dynamic Network: Mining and Parametric Analysis                     | 978-981-10-7272-7                                      | 2018                       |
| 9  | Jyoti Pruthi, Neha Nandal, Amit Chaudhary                 | CST             | Book Chapter  | Challenges in the Field of Aspect Level Sentiment Analysis                               | 9517408-6-7  | 2018                       |

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|----|--------------------------------|-----------|--------------|--|---|------|
| 10 | Khursheed Ahmad Wani and Mamta | Chemistry | Chapter      | Prospects of pesticide contamination and control measures in aquatic systems: A green approach | 9781522561118   | 2018 |
| 11 | Khursheed Ahmad Wani and Mamta | Chemistry | Chapter      | Prospects of pesticide contamination and control measures in aquatic systems: A green approach | 9781522561118   | 2018 |
| 12 | Anu Priya Sharma               | CST       | Chapter      | Analyzing the Role of Risk Mitigation and Monitoring in Software Development                   | 978-1-5225-6029-6   | 2018 |
| 13 | Meena Kapahi                   | Chemistry | Book Chapter | Biology of Macrofungi  | Print ISBN<br>978-3-030-02621-9<br>Online ISBN<br>978-3-030-02622-6<br>Springer, Cham | 2018 |
| 14 | Khursheed Ahmad Wani and Mamta | Chemistry | Chapter      | Prospects of pesticide contamination and control measures in aquatic systems: A green approach | 9781522561118   | 2018 |

### Research Publications in Journals during last three years as on 3.9.2019

| Sl. No. | Deptt. | Faculty Name      | Paper Title   | Authors   | Journal Name   | Details of Publication  | Year of Publication | ISSN            | Affiliation (MRU) |
|---------|--------|-------------------|---|---|--|---|---------------------|-----------------|-------------------|
| 1       | ECE    | Niharika Thakur   | Adaptive whale optimization for intelligent multi-constraints power quality improvement under deregulated environment | Niharika Thakur, Y K Awasthi, Manisha Hooda, A S Siddiqui | Journal of Engineering, Design and Technology                        | February 2019<br>Journal of Engineering Design and Technology 17(1)<br>DOI: 10.1108/JEDT-08-2018-0130 | 2019                | 1726-0531       | Y                 |
| 2       | ECE    | Niharika Thakur   | Advanced Hybrid Intelligent Model and Algorithm for Deregulated Electricity Market                                    | Manisha Hooda, Y K Awasthi, Niharika Thakur, AS Siddiqui  | Australian Journal of Electrical and Electronics Engineering         | Accepted 25-07-2019   | 2019                | 1448-837X       | Y                 |
| 3       | Maths  | Dr. Ruchi Gupta   | An Alternative Method to Reduce Medicine Costs By Minimizing Transportation Overheads                                 | Ruchi Gupta, Mukesh Sahu, Nikita, Komal                   | International Journal of Engineering and Advanced Technology (IJEAT) | Volume-8 Issue-4, pp. 91-94   | 2019                | ISSN: 2249-8958 | Y                 |
| 4       | CST    | Dr. Prinima Gupta | An Improved Method for Detecting Face as ROI in Video   | Ms. Urmila Pilia, Dr Prinima Gupta                        | International Journal of Recent Technology and Engineering (IJRTE)   | Volume-8, Issue-1, pp. 341-344  | 2019                | ISSN: 2277-3878 | Y                 |
| 5       | CST    | Dr. Jyoti Pruthi  | Aspect Based Sentiment Analysis Approaches with Mining of Reviews: A Comparative Study                                | Neha Nandal, Amit Chaudhary                               | International Journal of Recent Technology and Engineering (IJRTE)   | Volume-7 Issue-6, March 2019  | 2019                | Scopus          | Y                 |

|    |     |                    |  |  |  |  |      |                               |   |
|----|-----|--------------------|--|--|--|--|------|-------------------------------|---|
| 6  | ECE | Dr. Y K Awasthi    | Compact Multi-Band Planar Monopole Antenna for Bluetooth, LTE and Reconfigurable UWB Applications including X, Ku-Band Wireless Communications | Manish Sharma<br>Yogendra Kumar Awasthi<br>Himanshu Singh                                    | Wiley International Journal of RF and Microwave Computer-Aided Engineering | Volume 29. Issue 6                     | 2019 | 1096-4290                     | Y |
| 7  | DMC | Dr. Sachita Yadav  | Contemporary Financial Risk Management Strategies for Emerging Startups in India   | DR. Sachita Yadav & Akash  | International Journal of Advance & Innovative Research                     | Vol. 6, Issue 1, pg. 61-67, March 2019 | 2019 | 2394-7780                     | N |
| 8  | ECE | Dr. Y K Awasthi    | CPW-Fed Triple High Rejection Notched UWB & X-band Antenna on Silicon for Imaging & Wireless Applications                                      | Dr. Y K Awasthi  | International Journal of Electronics (Taylor & Francis)                    | Vol. 106, No. 7, pp. 945–959, 2019     | 2019 | 2168-1740                     | Y |
| 9  | CST | Gaganjot Kaur      | Cryptography Algorithm   | Gaganjot Kaur; Anurag Rawal; Gaurav Chhikara; Hitesh Khanna                                  | Journal of Analog and Digital Communications                               | Vol. 4 pp. 31-38                       | 2019 | No Indexing                   | Y |
| 10 | ECE | Meenakshi Gupta    | Design an Operational Amplifier as a building block of Analog to Digital converter in 350 nm Technology  | Meenakshi Gupta, Dr. V.K.Sharma, Bhanu Pratap Chaudhary                                      | Journal of information and Optimization Sciences (Taylor & Francis)        | March 2019 issue, pp. 505-520          | 2019 | 0252-2667                     | Y |
| 11 | ECE | Dr. Shruti Vashist | Design of E-shaped and Circular Array Antenna to Improve the Performance for WLAN and WiMax Network  | Gitika Gupta , Taruna Kaswan Saini, Yogita Gupta , Anchal Bhatia , Sunita Joshi, Y K Awasthi | Journal of Adv Research in Dynamical & Control Systems,                    | Volume 11, pp. 52-59                   | 2019 | 1943-023X                     | Y |
| 12 | CST | Manpreet Kaur      | Entailment and Spectral Clustering based Single and Multiple Document Summarization.   | Gupta A, Kaur M, Mirkin S, Bajaj A, Khanna A.  | I.J. Intelligent Systems and Applications                                  | Volume 4, pp.39-51                     | 2019 | DOI: 10.5815/ijisa.2019.04.04 |   |
| 13 | DMC | Dr. Sachita Yadav  | Environmental Friendly Green Technology used by Construction Industries in   | Dr. Sachita Yadav & Supriya  | International Journal of Advance & Innovative Research                     | 63571, Vol. 6, Issue 1, March 2019     | 2019 | 2394-7780                     | N |



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|----|-----------|----------------------|--|---|---|--------------------------|------|--------------------------|---|
|    |           |                      | Bangalore  |   |   |                          |      |                          |   |
| 14 | Physics   | Sandee p Kumar       | Erratum: Isolated terawatt attosecond hard X-ray pulse generated from single current spike   | C.H. Shim, S. Kumar, Y.W. Parc , In Soo Ko, and D.E. Kim                    | Scientific Reports (Nature)   | 9 (1), 8521, 2019        | 2019 | 2045-2322                | N |
| 15 | ECE       | Dr. Shruti Vashist   | Evaluation of Non-Orthogonal Techniques for Advance Wireless System  | Dipa Kokane, Geeta Nijhawan and Shruti Vashist                              | 'International Journal of Recent Technology and Engineering (IJRTE) | 8(2), Issue 2, July 2019 | 2019 | ISSN: 2277-3878 (Online) | Y |
| 16 | Chemistry | Dr P. K. Patnala     | Experimental and Kinetic studies on the combined influence of Ultrasonication and Rare Earths on removal of azo dyes               | Prem Kishore Patnala, Supriya Tilvi, Pankaj                                 | Separation Science and Technology                                   | 54(10), 2019: 1632-1649  | 2019 | 0149-6395                | Y |
| 17 | Chemistry | Dr. Vinayak V Pathak | Experimental studies on zeta potential of flocculants for harvesting of algae  | A Pandey, VV Pathak, R Kothari, PN Black, VV Tyagi                          | Journal of Environmental Management                                 | 231, 2019: 562-569       | 2019 | 0301-4797                | Y |
| 18 | Chemistry | Shilpa Sharma        | In vitro and in vivo studies of pH sensitive GHK-Cu incorporated polyaspartic and polyacrylic acid superabsorbent polymer          | Shilpa Sharma, Mohd. Faiyaz Anwar, Amit Dinda, Maneesh Singhal, Amita malik | Americal Chemical Society (ACS)                                     | June 2019                | 2019 | ISSN 0002-7863           | Y |
| 19 | Physics   | Haider Abbas         | Interaction and damage of nucleobases of DNA and RNA caused by silicon nanoparticle and crystalline silica: First principles study | Haider Abbas, Deepti Maikhuri, Charu Sharma                                 | Computational and Theoretical Chemistry                             | 1154 (2019) 26–30.       | 2019 | 2210-271X                | Y |
| 20 | Physics   | Dr. Sandee p Kumar   | Longitudinal phase space dynamics of witness bunch during the Trojan Horse injection for plasma-based particle accelerators        | K. Moon, S. Kumar, M. Hur, and M. Chung                                     | Physics of Plasma   | Vol. 26, 73103           | 2019 | 1089-7674                | Y |

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|----|-----------|-------------------------|---|--|--|---|------|------------------|---|
| 21 | CST       | Dr. Hardeo Kumar Thakur | Multi-class Instance incremental Framework for classification in fully Dynamic Graphs   | Hardeo kumar Thakur, Anand Gupta, Sreyashi Nag and Ritvik Shrivastava  | International Journal of Computational Science & Engg              | Accepted 25-07-2019                       | 2019 | 1742-7185        | Y |
| 22 | Maths     | Ramapati Maurya         | On Approximation by (p; q)-Meyer-Konig-Zeller Durrmeyer Operators   | Honey Sharma, Cheena Gupta, Ramapati Maurya  | Khayyam Journal of Mathematics (KJM)                               | Khayyam J. Math. 5 (2019), no. 1, 113-124 | 2019 | e-ISSN 2423-4788 | Y |
| 23 | ME        | J. P. Sharma            | Prediction of Universal Joint Behavior Under Small Axial Loading Using FEM  | J. P. Sharma   | Indian Journal of Science and Technology                           | 12(9), 2019: 1-7                          | 2019 | 0974-6846        | Y |
| 24 | CST       | Narender                | Role of Swarm Intelligence based Algorithms and their applications in Software Reliability Optimization   | Narender, Dr. Sona Malhotra  | International Journal of Recent Technology and Engineering (IJRTE) | Volume-8 Issue-2, July 2019               | 2019 | ISSN:2277-3878   | N |
| 25 | Physics   | Sandeep Kumar           | Terawatt-attosecond Soft x-ray Pulse Generation in X-ray free electron laser  | S. Kumar, Alexandra Landsman, Dong Eon Kim   | AIP Proceedings  | Vol.2136, 06001 (Mar 2019)                | 2019 |                  | Y |
| 26 | Education | Malini                  | The Narratives of Patriarchal Resistance: Ismat Chughtai's Short Stories  | Malini   | Pramana (International Refereed)                                   | Volume 8, Issue 31, Pages 640-643         | 2019 | 2249-2976        | N |
| 27 | Physics   | Haider Abbas            | A first principles study of key electronic, optical, second and third order nonlinear optical properties of 3-(4-chlorophenyl)-1-(pyridin-3-yl) prop-2-en-1-one: a novel D- $\pi$ -A type chalcone derivative | Mohd. Shkir <sup>1</sup> · S. AlFaify <sup>1</sup> · M. Arora <sup>2</sup> · V. Ganesh <sup>1</sup> · Haider Abbas <sup>3</sup> · I. S. Yahia <sup>1</sup> | Journal of Computational Electronics                               | March 2018, Volume 17, Issue 1, pp 9–20.  | 2018 | 1572-8137        | Y |
| 28 | CST       | Aarti                   | A Hybrid Cryptography and Authentication based Security Model for Clustered WBAN  | Aarti Sangwan, Partha Pratim Bhattacharya  | Journal of Mechanics of Continua & Mathematical Sciences           | vol. 13, no.1, pp. 34-54                  | 2018 | 2454-7190        | N |
| 29 | CST       | Dr. Parneeta Dhaliwal   | A novel online ensemble approach to handle concept drifting data streams: Diversified Dynamic   | P. Sidhu, MPS Bhatia   | Intl Journal of Machine Learning and Cybernetics                   | Volume 9, Issue 1, pp 37–61               | 2018 | 1868-808X        | N |

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|----|-----------|---------------------|---|--|---|---|------|---|---|
|    |           |                     | Weighted Majority   |  |   |   |      |   |   |
| 30 | CST       | Dr. Jyoti Pruthi    | A Proposed Model for Predicting High Risk Pregnancy Using Support Vector Machine                  | Deepanshi Gupta, Dr. Jyoti Pruthi                          | JARDCS  | Vol. 10-14 Special issue, 2018  | 2018 | Scopus  | Y |
| 31 | ECE       | Dr. Shruti Vashist  | A PSO Based Antenna Array Optimization For Wimax And WLAN Application                             | Ms. Poonam Ghangas and Dr. Shruti Vashist                  | Journal of Advanced Research in Dynamical and Control Systems | 2018  | 2018 | 1943-023X   | N |
| 32 | CST       | Anup Singh Kushwaha | A Review: On Current Trends in Image Fusion   | Anup Singh Kushwaha, Arpita Goel, Shivangi Agarwal         | IJCESR  | VOLUME-5, ISSUE-5, pp. 40-44  | 2018 | ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-5, ISSUE-5, Page-40-44, 2018 | Y |
| 33 | Maths     | Ramapati Maurya     | Approximation Properties of Kantorovich Type Modifications of (p; q)-Meyer-König-Zeller Operators | Honey Sharma, Ramapati Maurya, Cheena Gupta                | Constructive Mathematical Analysis (CMA)                      | Constructive Mathematical Analysis 1 (2018), No. 1, pp. 58-72 <a href="http://dergipark.gov.tr/cma">http://dergipark.gov.tr/cma</a> | 2018 | e-ISSN 2651-2939  | N |
| 34 | CST       | Dr. Sachin Lakra    | Architecture and Applications of an Adaptive Neuro-Fuzzy Inference System                         | Abhinav Sharma, Utkarsh Kaushik, Sachin Lakra              | International Journal of Research Fellow for Engineering      | 6(2), January 2018, 1-9.  | 2018 | 2320-7396   | Y |
| 35 | CST       | Gunjan              | Augmented Reality   | Pawan Gupta, Shivam Kalia, Vaibhav Hooda, Gunjan Chandwani | Journal of Software Engineering & Software Testing            | Vol 3, No 3   | 2018 | 2457-0516   | Y |
| 36 | Chemistry | Dr. Megha Bansal    | Combination therapy with vitamin C and DMSA for arsenic-fluoride co-exposure in rats              | Megha Mittal, SJS, Flora                                   | Metallomics   | 10(9), 2018: 1291-1306  | 2018 | 1756-5901   | Y |

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|----|-----------|-------------------------|--|---|---|------------------------------|------|-------------|---|
| 37 | Chemistry | Dr. Pradeep K. Varshney | Conductivity and structural studies of PVA based mixed-ion composite polymer electrolytes        | Sandeep Srivastava and Pradeep K. Varshney                        | International Journal of Engineering & Technology                                 | 7(2), 2018: 887-890          | 2018 | 2227-524X   | N |
| 38 | CST       | Gaganjot Kaur           | Cryptography: Symmetric vs Asymmetric Encryption   | Gaganjot Kaur; Anurag Rawal; Gaurav Chhikara; Hitesh Khanna       | Journal of Embedded Systems and Processing  | Volume 3 pp. 1-5.            | 2018 | No Indexing | Y |
| 39 | ME        | Prashant Bhardwaj       | Cutting Tool Prognostic using Markov Model   | Harpreet Singh, Himanshu Rawat, Mayank Sadhra & Prashant Bhardwaj | Indian Journal of Science and Technology  | 11(45), 2018: 1-4            | 2018 | 0974-6846   | Y |
| 40 | CST       | Mamta Arora             | Deep Learning:: Overview, Architecture, Framework & Applications                                 | Mamta Arora, Sanjeev Dhawan, Kulvinder Singh                      | International Journal of Latest Trends in Engineering and Technology              | Vol.(10)Issue(1), pp.379-384 | 2018 | 2278-621X   | N |
| 41 | CST       | Aarti                   | Delay Tolerant Energy Efficient protocol for InterBAN Communication in Mobile Body Area Networks | Aarti Sangwan, Partha Pratim Bhattacharya                         | International Journal on Advanced Science, Engineering and Information Technology | vol. 8, no. 3, pp. 938-948   | 2018 | 2460-6952   | N |
| 42 | ME        | Gianender Kajal         | Design and Manufacturing of a holding fixture to test the tensile strength of a flat specimen    | J.Singh, M.R.Tyagi, Ajit, Gianender & R.Yadav                     | International Journal of Applied Engineering Research                             | 13(6), 2018: 1-6             | 2018 | 0973-4562   | Y |
| 43 | Law       | Aditya Dhawan           | Economic Advantages of Demographic Dividend: The Case for India'                                 | Aditya Dhawan   | International journal of basic and Applied Research                               | June 2018                    | 2018 | 2249-3352   | N |
| 44 | ME        | Gianender Kajal         | Effect of Dielectric fluids used on EDM Performance: A Review                                    | K.Singh, Gianender, A.K umar & Ajit, Rinki Yadav                  | International Journal of Emerging Technologies in Engineering Research            | 5(10), 2017: 10-16           | 2018 | 2454-6410   | Y |

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|----|------------------------|----------------------|--|---|--|---------------------------------|------|--|---|
| 45 | Education and Humanity | Dr. Janhawi          | EhRho1 regulates phagocytosis by modulating actin dynamics through EhFormin1 and EhProfilin1 in <i>Entamoeba histolytica</i> .   | Dr. Janhawi   | Cellular Microbiology                      | Volume 20, Issue 9              | 2018 | 1462-5814, <a href="https://doi.org/10.1111/cmi.12851">https://doi.org/10.1111/cmi.12851</a> | N |
| 46 | Physics                | Aditya Sharma        | Electronic structure and dielectric properties of ZrO <sub>2</sub> -CeO <sub>2</sub> mixed oxides  | Aditya Sharma, Mayora Varshney, K.H. Chae, S.O. Won                 | Journal of Physics and Chemistry of Solids | 119 (2018) 242-250. (I.F. 2.05) | 2018 | ISSN/ISBN, 15671739, E-ISSN:0022-3697  | N |
| 47 | Physics                | Aditya Sharma        | Electronic structure and luminescence assets in white-light emitting Ca <sub>2</sub> V <sub>2</sub> O <sub>7</sub> , Sr <sub>2</sub> V <sub>2</sub> O <sub>7</sub> and Ba <sub>2</sub> V <sub>2</sub> O <sub>7</sub> pyrovanadates: X-ray absorption spectroscopy investigations | Aditya Sharma, Mayora Varshney, K.H. Chae, S.O. Won                 | RSC Advances                               | 8, 2018, 26423. (I.F. 2.91)     | 2018 | 20462069   | N |
| 48 | Maths                  | Dr. Ruchi Gupta      | Examining The Effect of The Magnetic Field on Free Convection Flows in Liquid Metals, Electrolytes and Ionized Gases   | Ruchi Gupta, Sandeep Srivastav                                      | IJSRSET                                    | Volume 4, Issue 4               | 2018 | ISSN : 2394-4099   | Y |
| 49 | Chemistry              | Dr. Vinayak V Pathak | Experimental and Kinetics Studies for Biogas Production Using Water Hyacinth ( <i>Eichhornia crassipes</i> [Mart.] Solms) and Sugar Mill Effluent  | V Kumar, J Singh, VV Pathak, S Ahmad, R Kothar                      | Waste and Biomass Valorization             | 2018, pp: 1-11                  | 2018 | 1877-2641  | Y |
| 50 | Chemistry              | Dr. Vinayak V Pathak | Experiment-based thermodynamic feasibility with co-digestion of nutrient-rich biowaste materials for biogas production   | R Kothari, S Ahmad, VV Pathak, A Pandey, S Singh, K Kumar, VV Tyagi | 3Biotech                                   | 8(34), 2018: 1-8                | 2018 | 2190-5738  | N |
| 51 | CST                    | Babita Ahuja         | Expert System for Web Form Extraction and Ranking of Web Forms   | Babita Ahuja, Dr. Anuradha, Dr. Dimple Juneja                       | Journal of Engineering Technology          | June 2018                       | 2018 | 0747-9964  | N |

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|----|-----------|----------------------|--|---|--|-------------------------------|------|-------------------|---|
| 52 | DMC       | Dr. Sachita Yadav    | Financial Literacy in India-2018   | Dr. Sachita Yadav                                       | KAAV, International Journal of Economics, Commerce & Business Management | Volume 5 Issue 1, March 2018  | 2018 | 2348 - 4969       | N |
| 53 | Chemistry | Dr. Vinayak V Pathak | Fuel quality index of transesterified and nontransesterified oil samples of Mustard and Ricebran Oil   | R Kothari, S Ahmad, VV Pathak, AK Pandey, R Saidur      | IET Digital Library  | Published, 2018: Page:6       | 2018 | 978-1-83953-003-6 | Y |
| 54 | Chemistry | Dr. Vinayak V Pathak | Fuel Quality Index: A Novel Experimental Evaluation Tool for Biodiesel Prepared from Waste Cooking Oil   | S Ahmad, R Kothari, VV Pathak, MK Pandey                | Waste and Biomass Valorization   | published : 2018, Pages:1-11  | 2018 | 1877-2641         | Y |
| 55 | Maths     | Dr. Dinesh Tripathi  | Generalization of An Inequality for the Polar Derivative of Polynomials  | D. Tripathi, S. Hans, Babita Tyagi                      | Journal-Non-Linear Functional Analysis and Application                   | 23(2), 2018, 311-321          | 2018 | 1229-1595         | Y |
| 56 | Physics   | Sandeep Kumar        | Generation of an isolated attosecond pulse via current modulation induced by a chirped laser pulse in an X-ray free electron laser                                 | S. Kumar, J. Lee, M. S. Hur, and M. Chung               | Journal of the Optical Society of America B-Optical Physics              | vol. 35, No.4 A75, (Apr 2018) | 2018 | 0740-3224         | N |
| 57 | Maths     | Dr. Dinesh Tripathi  | Inequality for Derivatives of Rational functions   | D. Tripathi, S. Hans, A. A. Mogbademu and Babita Tyagi  | Journal- Journal of Interdisciplinary Mathematics                        | 21(1), 2018, 157-169          | 2018 | 0972-0502         | Y |
| 58 | CST       | Dr. Prinima Gupta    | Integrating Application with Algorithms of Association Rule used in Descriptive Data Modelling, through which Data Mining can be Implemented for Future Prediction | Sumita Mukherjee, Dr. Prinima Gupta & Prof. Felix Musau | International Journal of Applied Engineering Research                    | Volume 13, Number 17          | 2018 | 0973-4562         | Y |
| 59 | Physics   | Sandeep Kumar        | Isolated terawatt attosecond hard X-ray pulse generated from single current spike  | C.H. Shim, S. Kumar, Y.W. Parc, In Soo Ko, and D.E. Kim | Scientific Reports (Nature)  | vol.8, 7463 (May 2018)        | 2018 | 2045-2322         | N |

|    |           |                          |  |  |  |                                    |      |                 |   |
|----|-----------|--------------------------|--|--|--|------------------------------------|------|-----------------|---|
| 60 | ECE       | Dr. Y K Awasthi          | Key Shaped Compact Planar UWB Antenna with Dual Band-Notched Characteristics   | Dr. Y K Awasthi  | International Journal of Ultra Wideband Communications and Systems       | Vol. 03, No. 04, pp. 225-236, 2018 | 2018 | 1758-728X       | Y |
| 61 | CST       | Dr. Jyoti Pruthi         | LB-ALSA: A Lexicon based Aspect level sentiment analysis model for product reviews   | Neha Nandal, Amit Chaudhary  | JARDCS   | Vol. 10-14 Special issue, 2018     | 2018 | Scopus          | Y |
| 62 | ME        | Sanjay Taneja            | LPG (Liquified Petroleum Gas) as a Fuel  | Sanjay Taneja  | International Journal of Emerging Trends in Engineering and Development  | 3(8), 2018: 26-30                  | 2018 | 2249-6149       | Y |
| 63 | Physics   | Aditya Sharma            | Mechanistic insights into the interaction between energetic oxygen ions and nanosized ZnFe <sub>2</sub> O <sub>4</sub> : XAS-XMCD investigations   | Jitendra Pal Singh, Aditya Sharma, Mayora Varshney, K.H. Chae, S.O. Won, | Physical Chemistry Chemical Physics                                      | 2018, 20, 12084 (I.F. 4.15)        | 2018 | 14639084        | N |
| 64 | Physics   | Aditya Sharma            | Mechanistic investigations on emission characteristics from g-C <sub>3</sub> N <sub>4</sub> , g-C <sub>3</sub> N <sub>4</sub> @Pt and g-C <sub>3</sub> N <sub>4</sub> @Ag nanostructures using X-ray absorption spectroscopy | Aditya Sharma, Mayora Varshney, K.H. Chae, S.O. Won,                     | Current Applied Physics  | 2018, (18), 1458–1464(I.F. 2.14)   | 2018 | 15671739        | N |
| 65 | CST       | Gunjan                   | Middleware Integration   | Jagmohan Chopra, Rupal, Nilender, Gunjan Chandwani                       |  |                                    | 2018 | Google Scholar  | Y |
| 66 | Education | Dr. Savita Sharma        | Mindfulness a Coping Mechanism and a Life Skill in Contemporary Era: A Study of Perceptions Held by Teacher Educators  | Dr. Savita Sharma  | Research Magma International Multidisciplinary Refereed Research Journal | Issue-1, Vol-2, March 2018.        | 2018 | 2456-7078       | Y |
| 67 | CST       | Mr. Ankur Kumar Aggarwal | Mining Big Data: Future Forecast of Weather  | Apurva Sehgal, Kanika Khurana, Ankur Kr Aggarwal, Cherry Singh           | Journal of Data Mining and Management                                    | Vol 3, No 3, pp. 10-17             | 2018 | ISSN: 2456-9437 | Y |

|    |           |                         |  |   |   |                                  |      |                 |   |
|----|-----------|-------------------------|--|---|---|----------------------------------|------|-----------------|---|
| 68 | CST       | Aarti                   | Multi-Level Parameter Processed Model to Optimize Clustered Distributed WBAN   | Aarti Sangwan, Partha Pratim Bhattacharya           | Journal of Telecommunication, Electronic and Computer Engineering         | vol. 10, no. 3, pp. 47-56        | 2018 | 2289-8131       | N |
| 69 | Chemistry | Dr. Pradeep K. Varshney | Non-enzymatic glucose sensor based on electrodeposition of platinum particles on polyaniline modified Pt electrode   | Shveta Malhotra, Yijun Tang and Pradeep K. Varshney | Analytical & Bioanalytical Electrochemistry                               | 10 (6), 2018: 699-715            | 2018 | 2008-4226       | N |
| 70 | Chemistry | Dr. Vinayak V Pathak    | Optimization of nutrient stress using <i>C. pyrenoidosa</i> for lipid and biodiesel production in integration with remediation in dairy industry wastewater using response surface methodology | S Ahmad, VV Pathak, R Kothari, A Kumar, SBN Krishna | 3 Biotech   | 8(326), 2018: 1-13               | 2018 | 2190-5738       | Y |
| 71 | Chemistry | Dr. Vinayak V Pathak    | Optimization of substrate concentration for sustainable biohydrogen production and kinetics from sugarcane molasses: Experimental and economical assessment                                    | V Kumar, R Kothari, VV Pathak, SK Tyagi             | Waste and Biomass Valorization  | 9(2), 2018: 273-281              | 2018 | 1877-2641       | N |
| 72 | Maths     | Dr. Ankit a Gaur        | Ordered Power Product of Polynomials and Product Quasi Cyclic Code   | Ankita Gaur   | Combinatorics, Information & System Sciences                              | Vol. 43 Issue 1-4, p99-110. 12p. | 2018 | ISSN: 0250-9628 | Y |
| 73 | CST       | Aarti                   | Performance measurement of ATTEMPT, SIMPLE and iM-SIMPLE over Scalable Networks  | Aarti Sangwan, Partha Pratim Bhattacharya           | International Journal of Electronics, Electrical and Computational System | vol. 7, pp. 70-79                | 2018 | 2221-7266       | N |



|    |           |                      |  |  |  |   |      |                 |   |
|----|-----------|----------------------|--|--|--|---|------|-----------------|---|
| 74 | Maths     | Dr.Ruchi Gupta       | Physical Characteristics of Laminar and Non Laminar Fluid Flows through Porous Medium  | Ruchi Gupta, Hambeer Sing  | International Journal on Future Revolution in Computer Science & Communication Engineering | Volume 4, Issue 3   | 2018 | ISSN: 2454-4248 | Y |
| 75 | ME        | Gianender Kajal      | Prediction of Mechanical and Wear Properties of Al-6061/MoS <sub>2</sub> (Molybdenum Disulphide) Composites  | R.Yadav, J.P. SHARMA, Gianender & Rekha Yadav  | International Journal of Innovative Research in Science, Engineering and Technology        | 6(8), 2017: 15839-15849   | 2018 | 2319-8753       | Y |
| 76 | ME        | Gianender Kajal      | Process Parameter Selection for Optimizing the Mechanical Properties of Stainless Steel (SS 202 & SS 316) in the Gas Tungsten Arc Welding  | Rekha & Gianender  | International Journal for Research in Applied Science & Engineering Technology             | 6(IV), 2018: 2684-2695  | 2018 | 2321-9653       | Y |
| 77 | ME        | Gianender Kajal      | Process Parameter Selection for Optimizing the Weld Pool Geometry of Stainless Steel (SS 202 & SS 316) of the TIG Welding using Taguchi Method   | Rekha & Gianender  | International Journal for Research in Applied Science & Engineering Technology             | 6(IV), 2018: 2674-2683  | 2018 | 2321-9654       | Y |
| 78 | Chemistry | Dr. Vinayak V Pathak | Prospects for pretreatment methods of lignocellulosic waste biomass for biogas enhancement: opportunities and challenges   | R Rani, PK Patnala, VV Pathak  | Bofuels  | 9(5), 2018: 575-594   | 2018 | 1759-7269       | Y |
| 79 | Physics   | Haider Abbas         | <i>Quantum chemical investigation on molecular structural, vibrational, photophysical and nonlinear optical properties of l-hreoninium picrate: an admirable contender for nonlinear</i> | S. AlFaify <sup>1</sup> · Mohd. Shkir <sup>1</sup> · M. Arora <sup>2</sup> · Ahmad Irfan <sup>3</sup> · H. Algarni <sup>1</sup> · Haider Abbas <sup>4</sup> · Abdullah G. Al-Sehemi <sup>3</sup> | Journal of Computational Electronics   | <a href="https://doi.org/10.1007/s10825-018-1230-9">https://doi.org/10.1007/s10825-018-1230-9</a> , 25 August 2018. | 2018 | 1572-8137       | Y |

|    |           |                   |  |  |  |                                 |      |                           |   |
|----|-----------|-------------------|--|--|--|---------------------------------|------|---------------------------|---|
|    |           |                   | <i>applications</i>  |  |  |                                 |      |                           |   |
| 80 | ME        | Prashant Bhardwaj | Reliability and Availability Analysis for a Manufacturing Network by using Active Redundancy   | Smriti Mishra, Prashant Bhardwaj, Neha Badhauria | International Journal of Applied Engineering Research                  | 13(6), 2018: 116-126            | 2018 | 0973-4562                 | Y |
| 81 | CST       | Aarti             | Reliable Energy Efficient Multi-hop Routing Protocol for Heterogeneous Body Area Networks  | Aarti Sangwan, Partha Pratim Bhattacharya        | International Journal of Sensors, Wireless Communications and Control, | vol. 8, no. 1, pp. 47-56        | 2018 | 2210-3287                 | N |
| 82 | Education | Malini            | Representation of Woman's Body in Indian Cinema: The Paradox of Objectification and Desexualisation of Female Body.                                | Malini   | Chintan (International Refereed Research Journal)                      | Volume 8, Issue 31, pages 94-98 | 2018 | 2229-7227                 | N |
| 83 | CST       | Aarti             | Revised EECBSR for Energy Efficient and Reliable Routing in WBAN   | Aarti Sangwan, Partha Pratim Bhattacharya        | Majlesi Journal of Telecommunication Devices                           | vol. 7, no. 2, pp. 33-40        | 2018 | 2322-1550                 | N |
| 84 | DMC       | Dr. Sachita Yadav | Risk and Return Analysis of the Stock Market in India: Special Reference to IT and Banking Sector  | Dr. Sachita Yadav                                | Dharohar,  | Vol. 6, Issue 2,                | 2018 | 2455-4448                 | N |
| 85 | DMC       | Dr. Animesh Singh | Role of Human Resource Development Climate on Organizational commitment in Auto Component Manufacturing Units in India: An Empirical Investigation | Animesh Singh & Urvesh Chaudhery                 | Drishtikon: A Management Journal                                       | Vol 9, Issue 2, 2018            | 2018 | 0975-7848                 | N |
| 86 | CST       | Ram Chatterjee    | Role of Social Media & Digital Marketing for Customer Loyalty  | Vijay Kumar, Saurav Kumar, Ram Chatterjee        | International Journal of Advanced Research                             | 6(9):1012-1016                  | 2018 | DOI: 10.21474/IJAR01/7764 | Y |

|    |           |                         |   |  |  |   |      |   |   |
|----|-----------|-------------------------|---|--|--|---|------|---|---|
| 87 | Law       | Aditya Dhawan           | Role of Unity of Teaching and Research for Improving Quality of Education   | Aditya Dhawan  | IJSHMS   | Vol. 4, No. 8, Aug. 2018  | 2018 | 2395-0692   | N |
| 88 | CST       | Dr. Hardeo Kumar Thakur | Rumor Detection on Twitter Using a Supervised Machine Learning Framework  | Hardeo Kumar Thakur, Anand Gupta, Ayushi Bhardwaj and Devanshi Verma | Journal  | International Journal of Information Retrieval Research, Volume 8 Issue 3, July 2018 , Pages 1-13 | 2018 | ISSN: 2155-6377 EISSN: 2155-6385 DOI: 10.4018/IJIRR | N |
| 89 | DMC       | Dr. Sachita Yadav       | Spot and Futures Market in India: Co-integration  | Dr. Sachita Yadav  | Asian Journal of Research in Banking and Finance | Volume: 8, Issue: 3   | 2018 | 2249-7323   | N |
| 90 | Education | Malini                  | Stephen Chbosky's The Perks of Being a Wallflower :Why and Why Not to Create a Controversy on Literature            | Malini   | Pramana (International Refereed)                 | Volume 7, Issue 29, pages 96-100  | 2018 | 2249-2976   | N |
| 91 | Physics   | Aditya Sharma           | <i>Structural, electronic structure and anti-bacterial investigations on graphene-oxide nano-sheets</i>             | Aditya Sharma, Mayora Varshney, K.H. Chae, S.O. Won                  | Chemical Physics Letters                         | 698 (2018) 85-92. (I.F. 1.9)  | 2018 | 0009-2614   | N |
| 92 | Physics   | Anshuman Sahai          | Structural, optical and vibrational study of zinc copper ferrite nanocomposite prepared by exploding wire technique | Surendra Singh, Anshuman Sahai, SC Katyal, Navendu Goswami           | Materials Science                                | Volume 36 (4), pp. 722–732, (2019)  | 2018 | ISSN 2083-1331 --> 2083-134X                        | Y |
| 93 | Physics   | Anshuman Sahai          | Structural, vibrational and electronic properties of CuO nanoparticles synthesized via exploding wire technique     | Inderpreet Singh, P. K. Bhatnagar, P. C. Mathur, and C. S. Bhatia    | Ceramics International                           | vol. 44 (2), pp. 2478-2484, 2018  | 2018 | ISSN: 0272-8842                                     | Y |
| 94 | CST       | Anup Singh Kushwaha     | Study of Various Scheduling Algorithm in Cloud Environment  | Anup Singh Kushwaha, Vinayak Kumar, Akash Sharma                     | IJERT  | Volume. 7 , Issue. 8  | 2018 | 2278-0181   | Y |

|     |           |                  |   |   |  |                                |      |           |   |
|-----|-----------|------------------|---|---|--|--------------------------------|------|-----------|---|
| 95  | Chemistry | Arpit Sand       | Synthesis and Characterization of Superabsorbent Polymer based on Carboxymethyl Cellulose-graft-Itaconic Acid     | Ko, So Yeon; Sand, Arpit; Shin, Nam Jae; Kwark, Young-Je    | Fibers and Polymers  | 19(2), 2018: 255-262           | 2018 | 1229-9197 | Y |
| 96  | ME        | Gianender Kajal  | Textiles for protection against Electromagnetic Radiations: A review  | Pratibha Malik, Astha Sharma, Gianender & J.P Sharma        | International Journal of Engineering Research and Applications                           | 8(6) Part-III, 2018: 32-37     | 2018 | 2248-9622 | Y |
| 97  | LAW       | Dr. Seema Gupta  | Voicing Dissent: A Functional Analysis  | Dr. Seema Gupta   | Upstream Research International Journal  | Vol. VI, Issue II , April 2018 | 2018 | 2321-0567 | N |
| 98  | ME        | Gianender Kajal  | Wear Behaviour of Aluminium 7075 based Composites Reinforced with SiC, Red Mud and Al <sub>2</sub> O <sub>3</sub> | Paras Mittal, Gianender & R. Yadav                          | International Journal for Research in Applied Science & Engineering Technology           | 6(IV), 2018: 2802-2816         | 2018 | 2321-9653 | Y |
| 99  | Education | Dr. Kiran Gupta  | Women and Health Issues   | Dr Kiran Gupta  | Edu track , A Neelkamal Publication, Educational Journal                                 | 43405                          | 2018 |           | Y |
| 100 | CST       | Ms. Urmila Pilia | Women Safeth Device based on Internet of Things (IOT)   | Urmila Pilia, Aishwarya Nair, Sakshi Arora, Virender Kadian | International Journal for Research in Applied Science & Engineering Technology (IJRASET) | Volume 6 Issue X               | 2018 | 2321-9653 | Y |

## PATENTS

| Filed Patents |   |  |                       |                     |       |                                |
|---------------|---|--|-----------------------|---------------------|-------|--------------------------------|
| Sl. No.       | Patent / Copyright  | Applicant  | Department            | Year of Application | Filed | Patent under MRU banner or not |
| 1.            | Horizontal Aerobic & Biodegradable Composting   | Meena Kapahi,<br>B.M. Bahal                                  | Chemistry/<br>Physics | 2019                | Yes   | Yes                            |
| 2.            | Production of Clean Water From Clay Mud Pot Filters   | Prem Kishore Patnala   | Chemistry             | 2019                | Yes   | Yes                            |
| 3.            | Microwave Sensing Device for Dielectric Characterization of Materials   | Yogita Khanna,<br>Dr. Y. K. Awasthi,<br>Anshuman Gupta       | ECE                   | 2019                | Yes   | Yes                            |
| 4.            | Fabrication of Non-Enzymatic Sensor Based on Non-Enzymatic Sensor Based on Pt/PVF Modified Pt. Electrode for Determination of Glucose (US PATENT) | Yijun Tang,<br>Shveta Malhotra,<br>Pradeep K. Varshney       | Chemistry             | 2018                | Yes   | No                             |
| 5.            | Multipurpose Medicated and Biodegradable Absorbent Material/Pad   | Meena Kapahi,<br>Arpit Sand,<br>B.M. Bahal,<br>Akansha Ahuja | Chemistry/<br>Physics | 2018                | Yes   | Yes                            |

Annexure-3.4

| CONSULTANCY EARNED BY THE DEPARTMENT |            |  |  |                                   |                        |                            |             |                          |                                 |  |                             |        |   |
|--------------------------------------|------------|--|--|-----------------------------------|------------------------|----------------------------|-------------|--------------------------|---------------------------------|--|-----------------------------|--------|---|
| Sl. No.                              | Deptt Name | Project Title                                  | Brief Summary of Consultancy Work Undertaken | Sponsoring Agency                 | Project Team           |                            |             | Project Financial Outlay | Month & Year of Start (mm/yyyy) | Current Status<br>1. Ongoing<br>2. Completed | Consultancy Amount Received |        | Date of Final Report Submission (dd/mm/yyyy)      |
|                                      |            |  |  |                                   | Principal Investigator | Other investigator, if any | Affiliation |                          |                                 |  | Date (dd/mm/yyyy)           | Amount |   |
|                                      |            |  |  |                                   | Name                   | Affiliation                | Name        | Affiliation              |                                 |  |                             |        |   |
| 1                                    | ME         | Introduction to Internal Combustion Engine     |  | SCCI India Pvt Ltd                | Dr. Sujata Nayak       | MRU                        | J P Sharma  | MRU                      | 2018                            | Completed                                    |                             | 405000 |   |
| 2                                    | Managemt   | Quality Tools & Inspection with Company Policy |  | Talbro's Automotive Component Ltd | Prof. Jaideep Singh    | MRU                        |             |                          | 2019                            | Ongoing                                      |                             | 480000 | 15000/- Per Manday + Taxes * 4 per month*8 months |
| 3                                    | Managemt   | Position of Regional Head Sales                |  | Heilo Beverages India Pvt. Ltd.   | Prof. Jaideep Singh    | MRU                        |             |                          | 2019                            | Ongoing                                      |                             | 65720  |   |

**SPONSORED RESEARCH PROJECTS**

| <b>Sl. No.</b> | <b>Financial Year</b> | <b>Name of Faculty (Principal Investigator)</b> | <b>Name of the Funding Agency</b> | <b>Title of the Project</b>                            | <b>Sanctioned Date</b> | <b>Amount Sanctioned (In Rs.)</b> |
|----------------|-----------------------|---|-----------------------------------|--|------------------------|-----------------------------------|
| <b>1</b>       | 2018-19               | Mr. J.P. Sharma                                 | CL Educate                        | Electric Agriculture Utility Vehicle                   | 14.01.2019             | 105444                            |
| <b>2</b>       | 2018-19               | Dr. Hardeo Thakur                               | CL Educate                        | Mining of Significant Patterns in Dynamic Graph        | 14.01.2019             | 200000                            |
| <b>3</b>       | 2018-19               | Dr. Prem Kishore Patnala                        | CL Educate                        | Ultrasonic assisted Metal Removal from Water Resources | 14.01.2019             | 110000                            |
| <b>4</b>       | 2018-19               | Mr. Vijay Gill                                  | CL Educate                        | Ultrasonic based Autonomous Robot                      | 14.01.2019             | 100000                            |

**Manav Rachna University, Faridabad**

**Seminar/ Conference/ Workshop organized by the Department**

| Sl. No | Department Name | Type of Event<br>1. Seminar<br>2. Workshop<br>3. Conference<br>4. Colloquium<br>5. Symposium<br>6. Fair / Exhibition | Title of the Event                                    | Level (National / International) | Venue | Duration | Date(s) (dd/mm/yyyy) |            |
|--------|-----------------|--|---|----------------------------------|-------|----------|----------------------|------------|
|        |                 |  |   |                                  |       |          | From                 | To         |
| 1      | Chemistry       | Conference   | Green Initiatives in Science & Technology (GIST-2019) | International                    | MRU   | 2        | 10.01.2019           | 11.01.2019 |
| 2      | Chemistry       | Educational Course   | Recent Advances in Green Chemistry and Technology     | International                    | MRU   | 5        | 07.01.2019           | 11.01.2019 |
| 3      | Physics         | Workshop   | Workshop on Raman spectroscopy                        | National                         | MRU   | 1        | 09.08.2019           | 09.08.2019 |
| 4      | Education       | Workshop   | Psychology  | National                         | MRU   | 1        | 14.03.2019           | 14.03.2019 |
| 5      | Education       | Workshop   | Capacity Building                                     | National                         | MRU   | 2        | 24.05.2019           | 25.05.2019 |
| 6      | Management      | Seminar  | Entrepreneurs Summit                                  | University                       | MRU   | 1        | 26.04.2019           | 26.04.2019 |



|    |           |          |   |               |     |   |            |            |
|----|-----------|----------|---|---------------|-----|---|------------|------------|
| 7  | ECE       | Workshop | ICT Based STC on Self Configured Wireless Sensor Networks | National      | MRU | 5 | 30.7.2018  | 03.08.2018 |
| 8  | CST       | Workshop | Agile Methodology   | National      | MRU | 1 | 30.01.2019 | 30.01.2019 |
| 9  | CST       | Workshop | Problem solving using Python                              | National      | MRU | 3 | 17.12.2018 | 19.12.2018 |
| 10 | CST       | Workshop | Agile Software Development                                | National      | MRU | 3 | 12.12.2018 | 14.12.2018 |
| 11 | CST       | Workshop | Agile Methodology   | National      | MRU | 1 | 06.03.2019 | 06.03.2019 |
| 12 | CST       | Workshop | Python Django and Introduction Data Science               | National      | MRU | 2 | 05.04.2019 | 06.04.2019 |
| 13 | CST       | Workshop | Supervised Machine Learning                               | National      | MRU | 5 | 10.06.2019 | 14.06.2019 |
| 14 | CST       | Workshop | Software Craftmanship                                     | National      | MRU | 3 | 27.06.2019 | 29.06.2019 |
| 15 | CST       | Workshop | React Native  | National      | MRU | 1 | 11.03.2019 | 11.03.2019 |
| 16 | Education | Workshop | Yoga and Meditation for students                          | Institutional | MRU | 1 | 20.03.2019 | 20.03.2019 |

## Seminar/ Conference/ Workshop organized by the Department

| Sl. No. | Deptt Name | Type of Event<br>1. Seminar<br>2. Workshop<br>3. Conference<br>4. Colloquium<br>5. Symposium<br>6. Fair / Exhibition | Title of the Event                                    | Level<br>(National / International) | Venue | Duration | Date(s) (dd/mm/yyyy) |            | Year |
|---------|------------|--|---|-------------------------------------|-------|----------|----------------------|------------|------|
|         |            |  |   |                                     |       |          | From                 | To         |      |
| 1       | Chemistry  | Conference   | Green Initiatives in Science & Technology (GIST-2019) | International                       | MRU   | 2 days   | 10 Jan               | 11 Jan     | 2019 |
| 2       | Chemistry  | Educational Course   | Recent Advances in Green Chemistry and Technology     | International                       | MRU   | 5 days   | 7 Jan                | 11 Jan     | 2019 |
| 3       | Physics    | Workshop   | Workshop on Raman spectroscopy                        | National                            | MRU   | 1        | 09-08-2019           | 09-08-2019 | 2019 |
| 4       | Education  | Workshop   | Psychology  | National                            | MRU   | 1        | 14.03.2019           |            | 2019 |
| 5       | Education  | Workshop   | Capacity Building                                     | National                            |       | 2        | 24.05.2019           | 25.05.2019 | 2019 |
| 6       | Management | Seminar  | Entrepreneurs Summit                                  | University                          | MRU   | 1        | 26.04.2019           | 26.04.2019 | 2019 |

|    |           |          |   |               |     |        |               |               |      |
|----|-----------|----------|---|---------------|-----|--------|---------------|---------------|------|
| 7  | ECE       | Workshop | ICT Based STC on Self Configured Wireless Sensor Networks | National      | MRU | 5 days | 30.7.2018     | 3.8.2018      | 2018 |
| 8  | CST       | Workshop | Agile Methodology   | National      | MRU | 1      | 30 Jan 2019   | 30 Jan 2019   | 2019 |
| 9  | CST       | Workshop | Problem solving using Python                              | National      | MRU | 3      | 17/12/2018    | 19/12/2018    | 2018 |
| 10 | CST       | Workshop | Agile Software Development                                | National      | MRU | 3      | 12/12/2018    | 14/12/2018    | 2018 |
| 11 | CST       | Workshop | Agile Methodology   | National      | MRU | 1      | 6 March 2019  | 6 March 2019  | 2019 |
| 12 | CST       | Workshop | Python Django and Introduction Data Science               | National      | MRU | 2      | 5 April 2019  | 6 April 2019  | 2019 |
| 13 | CST       | Workshop | Supervised Machine Learning                               | National      | MRU | 5      | 10 June 2019  | 14 June 2019  | 2019 |
| 14 | CST       | Workshop | Software Craftmanship                                     | National      | MRU | 3      | 27 June 2019  | 29 June 2019  | 2019 |
| 15 | CST       | Workshop | React Native  | National      | MRU | 1      | 11 March 2019 | 11 March 2019 | 2019 |
| 16 | Education | Workshop | Yoga and Meditation for Students                          | Institutional | MRU | 1      | 20/3/19       | 20/3/19       | 2019 |

**Manav Rachna University, Faridabad**  
**Expert Talks / Guest Lecture organized by the Department**

| Sl. No | Department Name | Type of Event  | Title of the Event   | Duration      |  | Date(s) (dd/mm/yyyy) |            |
|--------|-----------------|----------------|--|---------------|--|----------------------|------------|
|        |                 |                |  | No. of Day(s) |  | From                 | To         |
| 1      | Mathematics     | Expert Lecture | Applications of Mathematics in Science & Technology                            | 1             |  | 02.05.2019           | 02.05.2019 |
| 2      | Mathematics     | Expert Lecture | Scope for Mathematicians in field of Actuarial Sciences                        | 1             |  | 03.03.2019           | 03.03.2019 |
| 3      | Mathematics     | Expert Lecture | Role of Mathematical Techniques in Medical Decision-Making Processes           | 1             |  | 25.01.2019           | 25.01.2019 |
| 4      | Mathematics     | Expert Lecture | Fixed Point Theory – It's Emergence, Scope & Applications in various fields    | 1             |  | 31.10.2018           | 31.10.2018 |
| 5      | Mechanical      | Workshop       | Basics of HVAC Systems   | 1             |  | 11.07.2018           | 11.07.2018 |
| 6      | Mechanical      | Workshop       | Introduction to VRV Systems  | 1             |  | 29.09.2018           | 29.09.2018 |
| 7      | Mechanical      | Workshop       | Solar PV System Engineering  | 1             |  | 17.09.2018           | 17.09.2018 |
| 8      | Mechanical      | Workshop       | Introduction to EURO Norms   | 1             |  | 13.09.2018           | 13.09.2018 |
| 9      | Mechanical      | Workshop       | Assembly & Disassembly of Single Cylinder Petrol & Four Cylinder Diesel Engine | 2             |  | 20.09.2018           | 21.09.2018 |
| 10     | Mechanical      | Workshop       | Introduction to Dell Cam & Master Cam  | 1             |  | 27.09.2018           | 27.09.2018 |

|    |            |                             |  |   |            |            |
|----|------------|-----------------------------|--|---|------------|------------|
| 11 | Mechanical | Workshop                    | Introduction to Biofuels   | 1 | 02.10.2018 | 02.10.2018 |
| 12 | Mechanical | Workshop                    | Basic Knowledge of 3D Modelling Software   | 1 | 24.01.2019 | 24.01.2019 |
| 13 | Education  | Expert Lecture              | Mindfulness  | 1 | 24.10.2018 | 24.10.2018 |
| 14 | Education  | Public Lecture              | Be Selfish Embrace Gratitude and Mindfulness   | 1 | 31.01.2019 | 31.01.2019 |
| 15 | Education  | FDP                         | Designing Evaluation Rubrics   | 1 | 16.02.2019 | 16.02.2019 |
| 16 | Education  | Expert Lecture              | Creative Teaching Tools  | 1 | 05.03.2019 | 05.03.2019 |
| 17 | Education  | Expert Lecture              | JOSH Talk  | 1 | 13.03.2019 | 13.03.2019 |
| 18 | Education  | Expert Talk                 | Data protection: Privacy in the International Context and its impact on the Education Sector | 1 | 21.08.2018 | 21.08.2018 |
| 19 | Education  | Expert Talk                 | Gender based Violence and Acid Attack  | 1 | 11.09.2018 | 11.09.2018 |
| 20 | Education  | Expert Talk                 | Law and Sociology  | 1 | 11.09.2018 | 11.09.2018 |
| 21 | Education  | Book Lecture/ Book Talk     | Unravelling the Kashmir Knot   | 1 | 16.10.2018 | 16.10.2018 |
| 22 | Education  | Workshop by PACT            | Mediation Workshop   | 2 | 15.10.2018 | 16.10.2018 |
| 23 | Education  | Manav Rachna Public Lecture | Role of Indians in building Independent India  | 1 | 31.10.2018 | 31.10.2018 |
| 24 | Education  | Elocution Contest           | Elocution Contest: Corruption Free India   | 1 | 01.11.2018 | 01.11.2018 |
| 25 | Education  | Expert Lecture              | Expert talk on Challenges in Legal Profession: Decoding the Myths and Realities.             | 1 | 26.11.2018 | 26.11.2018 |

|    |           |                        |   |   |            |            |
|----|-----------|------------------------|---|---|------------|------------|
| 26 | Education | Law Day Expert Lecture | Launch of Manav Rachna Expert Lecture Series: First Lecture on Legal Education                | 1 | 26.11.2018 | 26.11.2018 |
| 27 | Education | Field Work             | E-Awareness   | 6 | 09.02.2019 | 15.02.2019 |
| 28 | Education | Workshop               | Legal Aid Workshop and Field Visit  | 2 | 07.03.2019 | 08.03.2019 |
| 29 | Education | Expert Lecture         | Expert Lecture on Law - Arbitration and Challenges  | 1 | 13.03.2019 | 13.03.2019 |
| 30 | Education | Expert Lecture         | Gender Sensitization  | 1 | 02.04.2019 | 02.04.2019 |
| 31 | Education | Expert Lecture         | Expert Lecture on Law - Legal Education and Training  | 1 | 19.04.2019 | 19.04.2019 |
| 32 | Chemistry | Invited Lecture        | Invited Lecture on Switchable Membranes for separation, synthesis, and catalytic applications | 1 | 26.04.2019 | 26.04.2019 |
| 33 | Chemistry | Invited Lecture        | Lecture on How to excel in Chemistry in the 21st Century: Some useful Tips                    | 1 | 11.04.2019 | 11.04.2019 |
| 34 | Chemistry | Invited Lecture        | Polymer Composites  | 1 | 24.10.2018 | 24.10.2018 |
| 35 | Chemistry | Invited Lecture        | Polyolefins-An Overview   | 1 | 20.09.2018 | 20.09.2018 |
| 36 | Chemistry | Invited Lecture        | Global warming and its effect in climate change   | 1 | 18.09.2018 | 18.09.2018 |
| 37 | Physics   | Expert Talk            | Inosphere and Its Importance  | 1 | 08.03.2019 | 08.03.2019 |
| 38 | Physics   | Expert Talk            | Emerging Applications of Smart Materials  | 1 | 15.03.2019 | 15.03.2019 |
| 39 | ECE       | Workshop               | VLSI Design   | 5 | 24.08.2018 | 28.08.2018 |
| 40 | ECE       | Workshop               | Self- Configured Wireless sensor Networks   | 5 | 30.07.2018 | 03.08.2018 |

|    |           |                             |  |   |            |            |
|----|-----------|-----------------------------|--|---|------------|------------|
| 41 | ECE       | Workshop                    | Optimization using MATLAB                          | 5 | 27.08.2018 | 31.08.2018 |
| 42 | ECE       | Workshop                    | Digital System Design                              | 5 | 28.01.2019 | 02.02.2019 |
| 43 | ECE       | Workshop                    | CMOS Analog VLSI Design                            | 5 | 04.02.2019 | 08.02.2019 |
| 44 | ECE       | Workshop                    | Machine Health Monitoring and Evaluation using IOT | 5 | 25.03.2019 | 29.03.2019 |
| 45 | ECE       | Expert Lecture              | "Total Quality Person"                             | 1 | 06.08.2018 | 06.08.2018 |
| 46 | CST       | Expert Talk                 | Cyber Security                                     | 1 | 05.11.2018 | 05.11.2018 |
| 47 | CST       | Expert Talk                 | Quality Assurance and Software Testing             | 1 | 02.11.2018 | 02.11.2018 |
| 48 | CST       | Expert Talk                 | Agile Development                                  | 1 | 15.11.2018 | 15.11.2018 |
| 49 | CST       | Expert Talk                 | Cyber Security                                     | 1 | 22.01.2019 | 22.01.2019 |
| 50 | Chemistry | Expert Lecture cum Activity | Dragon Fly Count                                   | 1 | 09.08.2018 | 09.08.2018 |
| 51 | Chemistry | Expert Lecture cum Activity | Butterfly Count                                    | 1 | 21.09.2018 | 21.09.2018 |

## Invited / Expert Talks Delivered by the Faculty Members

| Sl. No. | Name of Faculty Member  | Deptt.    | Topic   | Name of the Event  | Event Sponsored by Funding Organization, if any | Date (dd/mm/yyyy) | Name & level of Institution / Organization, where Talk Delivered |  |
|---------|-------------------------|-----------|---|--|---|-------------------|--|--|
|         |                         |           |   |  |   |                   | Name   | Level (in dropdown<br>1. National<br>2. International) |
| 1       | Dr. Pradeep K. Varshney | Chemistry | Faculty Development Programme                             | Entrepreneurship Awareness Camp                            | New Gen IEDC under DST Nimat Scheme             | 27.09.2018        | NewGen IEDC, MRIIRS, Faridabad.                                  | National   |
| 2       | Dr. Pradeep K. Varshney | Chemistry | Nanotechnology Innovation for the Industry                | NSTC Nanotech 2018 (Conference and Expo)                   | Reinstate Nano Ventures Pvt. Ltd.               | 28.11.2018        | Crowne Plaza Hotel, Mayur Vihar, New Delhi                       | National   |
| 3       | Dr. Pradeep K. Varshney | Chemistry | Technology Assistance from R&D Labs & other Institutions. | Two Week Faculty Development Programme on Entrepreneurship | NewGen IEDC under DST Nimat Scheme              | 03.12.2018        | NewGen IEDC, MRIIRS, Faridabad.                                  | National   |
| 4       | Dr. Arpit Sand          | Chemistry | Synthesis and Characterization of Graft Copolymers        | Polymers: Usefulness and Current Concerns                  |   | Dec 23-24 2018    | Motilal Nehru National Institute of Technology Allahabad         | National   |
| 5       | Dr. Savita Sharma       | Education | Spirituality Guided Mindfulness for Teachers              | Workshop   |   | 21st May 2019     | Manav Rachna School Charmwood                                    | Institutional  |
| 6       | Dr. Savita Sharma       | Education | Spirituality guided Mindfulness for Teachers              | Workshop   |   | 23rd May 2019     | Manav Rachna School Gurgaon                                      | Institutional  |



|    |                    |            |  |  |                                    |                      |  |               |
|----|--------------------|------------|--|--|------------------------------------|----------------------|--|---------------|
| 7  | Mr. Gianender      | ME         | Lecture on Engineering Graphics & Autocad        | Expert Lecture   | Govt. Organization                 | Sept. 2018           | Govt. Polytechnic Faridabad for Women    | Institutional |
| 8  | Dr Pragati Chauhan | Management | Lecture on Value Proposition                     | Two Week Faculty Development Programme on Entrepreneurship | NewGen IEDC under DST Nimat Scheme | 28th Feb 2019        | New Gen IEDC, MRIIRS FBA                 | FDP           |
| 9  | Dr Pragati Chauhan | Management | Lecture on Business Modelling                    | Two Week Faculty Development Programme on Entrepreneurship | NewGen IEDC under DST Nimat Scheme | 28th Feb 2019        | New Gen IEDC, MRIIRS FBA                 | FDP           |
| 10 | Dr Rashee Singh    | Education  |  | Live Radio Talk on NIOS Channel                            |                                    | 28th February 2019   | NIOS, Noida                              | National      |
| 11 | Dr Rashee Singh    | Education  |  | Live Radio Talk on NIOS Channel                            |                                    | 7th March 2019       | NIOS, Noida                              | National      |
| 12 | Meena Kapahi       | Chem       | Best out of Waste                                | Workshop   | Summer Camp                        | 16th - 31st May 2019 | Jagriti Sewa Trust, Sector 16, Faridabad |               |
| 13 | D. K. Sharma       | Physics    | Atmospheric Aerosols and their impact on Climate | Expert Lecture   | DST                                | November 16-21, 2019 | BHU, Varansi                             | International |
| 14 | D. K. Sharma       | Physics    | Ionospheric Phenomena                            | Expert Lecture   | DST                                | April 26-27, 2019    | Central University, Jammu                | International |
| 15 | D. K. Sharma       | Physics    | Atmospheric Aerosols                             | Expert Lecture   | UGC                                | April 24-25, 2019    | SMVDU, Katra                             | National      |
| 16 | Shreyasi           | Education  | Building Rubrics                                 | Resource Person  |                                    | 16th Feb, 2019       | MRU                                      | University    |

## COLLABORATIONS 2019

| Institute   | Country                 |
|---|-------------------------|
| Abdullah Gul University                             | Turkey                  |
| AIS St. Helens                                      | New Zealand             |
| Algonquin College                                   | Canada                  |
| Antioquia School of Engineering (EIA), Columbia USA | USA                     |
| Association of International Accountants            | UK                      |
| Autonomous University of Sinaloa                    | Mexico                  |
| Bangladesh Institute of Sports & Sciences           | Bangladesh              |
| Binawan Institute of Health Sciences                | Indonesia               |
| Curtin University                                   | Australia               |
| Edinburg Napier university                          | UK                      |
| Gerlev P.E. & Sports Academy                        | Denmark                 |
| University Sains Malaysia                           | Malaysia                |
| Hasan Kalyoncu University                           | Turkey                  |
| Istanbul Commerce University                        | Turkey                  |
| Istanbul Kultur University                          | Turkey                  |
| Lahti University of Applied Sciences                | <a href="#">Finland</a> |
| Missouri State University                           | USA                     |
| Our Lady of the Lake University                     | USA                     |
| Purdue University North West                        | USA                     |
| Royal Agriculture University                        | UK                      |
| TSUKBA University                                   | Japan                   |
| Universiti Pendidikan Sultan Idris                  | Malaysia                |
| University of Pitesti                               | Romania                 |
| College Sevigne                                     | France                  |
| University College of Northern Denmark              | Denmark                 |
| University of North America                         | North America           |
| Istanbul Aydin University                           | Turkey                  |

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|--|----------------------------|
| President University                       | <a href="#">Indonesia</a>  |
| Vinh University                            | Vietnam                    |
| University of Regina                       | Canada                     |
| University Of Malaya                       | Malaysia                   |
| T.C.Beykent University                     | Turkey                     |
| Syrian Private University                  | Syria                      |
| Asia University                            | Vietnam                    |
| Akamai University                          | USA                        |
| Al Mustaqbal University College            | Iraq                       |
| Karabuk University                         | Turkey                     |
| The University of Nottingham               | UK, China                  |
| Auburn University of Montgomery            | USA                        |
| University of the West of England          | <a href="#">UK</a>         |
| Universidade Lusofona                      | Portugal                   |
| The University of Wisconsin                | <a href="#">USA</a>        |
| Nottingham Trent University                | UK                         |
| Poleskey State University                  | Pinsk                      |
| Universitas Indonesia                      | Indonesia                  |
| University of New Castle                   | <a href="#">Australia</a>  |
| Universidad Nacional Villa Maria           | Argentina                  |
| Haaga-Helia University of Applied Sciences | Finland                    |
| Laurea University of Applied Sciences      | Finland                    |
| Metropolia University of Applied Sciences: | Finland                    |
| Istanbul Gedik University                  | Turkey                     |
| University of North Texas                  | USA                        |
| Osh State University                       | <a href="#">Kyrgyzstan</a> |
| Korean Culture Centre                      | Delhi                      |
| Western Sydney University                  | Australia                  |
| Illinois Institute of Technology           | Chicago, USA               |