

# महिला अभियांत्रिकी महाविद्यालय अजमेर MAHILA ENGINEERING COLLEGE AJMER

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# ANNUAL REPORT 2019-20



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## INSTITUTE BASIC INFORMATION

Mahila Engineering College Ajmer holds the privilege of being the first Engineering College for Women in North India under government setup. Foundation stone of the college was laid down on 30th April, 2007. Presently the college status is "An Autonomous Institution of Govt. of Rajasthan". The college is acting as a pedestal for girl students to explore the technical skills, fostering them to acquire and update their knowledge, skills and abilities in varied fields. The college offers various engineering programs at the undergraduate and postgraduate level. All these programs are conducted as per the norms of All India Council of Technical Education (AICTE), New Delhi. The college provides state-of-the-art infrastructure within its sprawling campus and has been a cynosure for girl students from all quarters of the country. At present, 1200 students are studying in various bachelor and masters programs. The institute was established with the noble vision of attaining excellence in imparting technical education to females.

The institute stands committed to impart quality education for holistic development of the students. Since the inception, the college has developed manifolds and is proving its potential every hour. The success is credited to the energetic, dedicated and experienced faculty and staff of the college which comprises 86 teaching (65-regular and 21-NPIU contract) and 48 non-teaching members.

Under the prime guidance of Hon'ble Minister for Technical Education, Government of Rajasthan, the college has recently accomplished a few notable milestones in the session 2019-20.

1. College has successfully completed the second phase of Technical Education Quality Improvement Program (TEQIP-II) and is now running in the third phase (TEQIP-III). Academicians from IITs, NITs and other institutes of repute and national importance are invited for expert lectures on continual basis to provide technical guidance to the students. Under the TEQIP-III project, Dr. B.R. Ambedkar National Institute of Technology (NIT) Jalandhar has been designated as the mentor institute for the college. As part of the same, nine twinning activities have been successfully conducted during the session. These comprise one international, two national level conferences and six short-term courses.
2. Under the All India Council for Technical Education (AICTE) Collaborative Research Scheme NPIU-MHRD, the college has been awarded with eleven research projects.
3. Under the Collaborative Research Scheme of TEQIP-III five projects worth Rs 10 Lakhs have been sanctioned by Rajasthan Technical University (RTU), Kota.

4. Research Centre has been established in the Electronics and Communication Engineering Department for pursuing doctoral research under the Bikaner Technical University (BTU), Bikaner.
5. To get clean and green energy, a grid connected Rooftop solar PV power plant of capacity 246.67 KW has been installed in the college premises including girl's hostel under RESCO model.
6. The College has successfully uploaded the Self-Assessment Report for National Board of Accreditation for all the six programs at the undergraduate level. The NBA visit is awaited.
7. The college has distributed four hundred and fifty six degrees to students under various undergraduate and postgraduate programs in its second convocation on 19 August 2019.
8. Regular plantation drives are being organised by the students and faculty members under the "Ek Ped Ek Zindagi" campaign. The stakeholders take oath to keep their campus clean and green. As a result, the college has a lush green campus with approximately 2000 trees. In recent times, the college has organised two plantation drives. These drives were part of the 150th anniversary celebration of Rashtrapita Mahatma Gandhi and the AICTE Induction program, organised on July 27th and August 9th, 2019, respectively.
9. Various extracurricular activities take place in the college regularly. Students engage themselves in events organised by Spic-Macay, Vivekanand Study Circle, etc. Educational and Industrial tours are also organised so that students get hands on practical knowledge too.
10. Students also participate in various state and national level competitions and have consistently proved their worth in academics, hackathons and sports as well.

## **INTRODUCTION OF AJMER AND LOCATION**

The college is located on NH-79 and is easily accessible through rail and road. The nearest airport is at Kishangarh. Ajmer is the heart of the royal state of Rajasthan, and is situated in the South west of Jaipur, and wrapped through the greens of Aravali hills. Historically it is the city of Samrat Prithviraj Chouhan and has been the centre of culture and Education. Ajmer houses the tomb of 13th century Sufi Saint Khwaja Moinuddin Chishti. Besides this, Ajmer has Pushkar Teerth which is known as the sole abode of Lord Brahma. The lakes Anasagar, Pushkar, Foyasagar enhance the scenic beauty of Ajmer and attracts a lot of tourists to witness the picturesque magnificence of it. The Institute is located at Makhapura, Nasirabad Road, Ajmer.

## ADMISSION PROCESS

Admissions in B.Tech programs is done through Rajasthan Engineering Admission Process (REAP) and for MCA program through Rajasthan Master of Computer Application Admission Test (RMCAAT). The admissions in M.Tech programs are done through Rajasthan Centralized Admission to M.Tech. PhD admissions are done through DAT (Doctoral Admission Test) organized by the affiliating university.

## PROGRAMS OFFERED

Department	Programs Offered	Students Intake (2019-20)	Students Intake (2020-21)
<b>Computer Engineering</b>	B.Tech in CSE	120	120
	B.Tech in IT	60	60
	M.Tech in CSE	24	24
	MCA	60	60
<b>Electronics and Communication Engineering</b>	B.Tech in ECE	120	60
	B. Tech in AI & ML (Artificial Intelligence and Machine Learning)	-	30
	B. Tech in IoT (Internet of Things)	-	30
	M.Tech in DC (Digital Communication)	24	24
	PhD (Digital Communication)	8	8
<b>Electrical Engineering</b>	B.Tech in EE	60	60
	B.Tech in EEE	120	60
	M.Tech in PS (Power System)	24	24
<b>Mechanical Engineering</b>	B.Tech in ME	60	60

## VISION AND MISSION

### VISION

To attain excellence in imparting technical education to females.

### MISSION

1. To impart technical knowledge and infuse a sense of enthusiasm among students to design, create and invent -who possess a knack to design, create and develop products and services which will cater to the needs of future generations thereby leading to sustainable development.
2. To promote women technocrats to make a meaningful contribution by creating a pool of talented human resources - who are capable enough to resolve the problems faced by the country using the knowledge imparted, talent inculcated and the research which we do.
3. To prepare self reliant females for the technological growth of the nation and society- to train and create technical manpower by laying strong theoretical foundation accompanied by a wide practical training which in turn will become a valuable resource for the society.
4. To facilitate and provide state-of-the-art facilities to women technocrats and faculty- to create an environment where novel ideas blossom, research flourishes and becomes the knowledge house of tomorrow's leaders and innovators.

## AFFILIATING UNIVERSITY

The college is affiliated to Bikaner Technical University, Bikaner, Rajasthan from 2018 onwards. The students admitted before 2018 are pursuing their studies under Rajasthan Technical University, Kota, Rajasthan.

### BIKANER TECHNICAL UNIVERSITY

Bikaner Technical University (BTU) is based in the campus of the University College of Engineering & Technology (UCET), Bikaner. The university is located in the RIICO Karni industrial area of Bikaner, which is about 400 km from New Delhi. It has been established by the University of Bikaner Act, 2017 (act no. 31 of 2017) established in 2017. Its first session was started in 2018.

One of the main purposes of the university was to share the workload with Rajasthan Technical University (RTU), which is located in Kota. Initially, the aim of BTU was to handle the load of technical institutes in 12 districts of the Western

Rajasthan along with introducing new courses and research programs which are of importance to the region. All technical institutes of the Bikaner division, Jodhpur division, Ajmer division (district Nagaur, Ajmer), Jaipur division (district Alwar, Sikar, and Jhunjhunu) are under the administrative and academic control of BTU.

## **RAJASTHAN TECHNICAL UNIVERSITY**

Rajasthan Technical University (RTU) is located in Kota in the state of Rajasthan. It was established in 2006 by the Government of Rajasthan to enhance the technical education in the state. The university has been established in the campus of University College of Engineering, Kota (previously known as Engineering College, Kota), which is located on the Rawatbhata Road, about 14 kms from Kota Railway Station and 10 kms from Kota Bus Stand.

The university currently affiliates about 68 Engineering Colleges, 03 B.Arch, 16 MCA Colleges, 39 MBA Colleges, 31 M.Tech Colleges, 01 M.Arch and 01 Hotel Management and Catering Institute. More than 1.5 lacs students study in the various institutes affiliated to the University.

The University aims to provide quality technical education which may help Rajasthan in it's technical development and will boost the technical environment in the country.

The University offers almost all the disciplines related to technical education including Bachelor of Technology, Master of Technology, Master of Business Administration, Master of Computer Applications, and Bachelor of Hotel Management and Catering Technology.

Academic Calendar: The Academic Calendar of college is prepared in conformance with the academic calendar of the affiliating University.

## **INFRASTRUCTURE**

The college has promising infrastructural facilities such as Laboratories, Classrooms, Library, Academic Block, Hostel, and Conference - Seminar Room etc. Within a short span of twelve years, the college has managed to provide well developed educational environment comprising of the furnished administrative block, two academic blocks with more than 20 modern classrooms, two computer-centers with 400 latest computers, a rich central library, and four on-campus hostels with total accommodation capacity of more than 700 girl students. In the present time, the college has a total of 20000 sq. m. constructed area with good connecting roads and lush green, eye-catching campus.



**CAMPUS AREA:** The campus of the Institute is spread over an area of 40 acres. The campus presents a spectacular view of natural beauty and pictures. The area of the campus is well distributed for:

**BUILDINGS:** The campus holds three buildings namely: Himalyan Bhawan, Gurushikar Bhawan, Shivalik Bhawan. In addition to it, the college also has four hostels namely Mansi Hostel, Maahi Hostel, Raavi Hostel, Babu Jag Jeevan Ram Hostel. Institute also has a dedicated building for Swami Vivekananda Central Library and Vatsalya Bhawan(Creche).

**SMART CLASSROOM:** The institute has developed a total of 21 (13+8) of its classrooms into smart digital classrooms. The class rooms have been equipped with the latest audio visual devices to make the teaching learning process more effective.

**RESEARCH LABORATORY:** Research lab of ECE department is one of the modern labs with state-of-the-art facilities in the whole Rajasthan. This lab has facilities like Anechoic Chamber up to 40 GHz, Performance Network Analyzer (PNA) up to 43.5 GHz, spectrum analyser up to 8 GHz with fabrication facilities through chemical etching and MITS-ELEVEN prototype machine. This lab is also equipped with advanced computing facilities with software tools like High Frequency Structure Simulator (HFSS) and CST Studio Suite for 3D Electromagnetic (EM) Simulation, MATLAB, Opti-Wave and Advanced Design System (ADS).

**COMPUTER FACILITIES:** The institute has highly rich computer facilities with heterogeneous working platforms such as Windows, Linux etc. The computer lab has a variety of software's for providing interactive learning in varied technologies. The college has adequate internet facilities and excellent learning atmosphere.

**VATSALYA BHAWAN:** Vatsalaya Bhawan was established in March 2017 in which crèche and medical facilities are available with nursing staff. The safety and security of children is a major issue with working mothers and married students. Crèche aims at providing a comfortable, safe and secure environment to the children of the institute employees and married students.

**CANTEEN:** College has a spacious canteen facility in the college premises and is run by college management. A variety of south Indian food and other items are provided to the students and staff of the college at highly subsidized rates with highest quality.

**TEMPLE:** The campus also has a temple where several rituals are performed from time to time to provide positive energy to all the residents on the campus.

**TRANSPORT:** The Institute has its fleet of buses which ferry students from all over the city and make commutation trouble-free.

**DISPENSARY:** Dispensary is accommodated with a primary health care unit for the students residing in hostels in emergency situations.

**LANGUAGE LAB:** The institute has established English Language Laboratory with forty computers and the latest software. It plays an important role in enhancing English proficiency and communication skills. The state of the art language lab emphasizes on Listening, Speaking, Reading and Writing skills. The software allows the students to listen to model pronunciation, repeat and record the same, to perform, evaluate and do self assessment.

**SOLAR POWER PLANT:** The demand for electrical power is increasing every day due to increased industrialization and social development. The power generation is mainly dependent on natural resources like coal and diesel. The college has realized the importance of the use of renewable energy resources like solar, due to depleting conventional sources of energy. As per Paris agreement, India is committed to set up 175GW of renewable energy till 2022. Factors such as frequent power cuts, increasing prices of conventional power, high irradiation and the falling costs of solar are driving the demand in the Rooftop Market. The RESCO Solar model of PV installation is working in India due to low-cost intensive options as compared to CAPEX model where the entire system is owned by the rooftop owners. Central and State Government agencies provide subsidies to RESCO Solar developers on overall project cost. Currently, 1GW Rooftop capacity is installed in India. Government has targeted 40GW Rooftop Capacity till 2022. In order to meet the goal, in some special category states upto 70% subsidy is given to RESCO solar developers.

To get clean and green energy, 02 stand-alone solar power plants of capacity 10KWp each and 60 numbers SPV street lighting system at college premises were installed in January 2010 and June 2013, respectively. The Minister of New renewable energy sources (MNRE), Govt. of India had provided financial assistance under Jawaharlal Nehru National solar mission to complete these projects. Last Year, a grid connected rooftop solar PV power plant of capacity 246.67 KWp has also been installed in college premises including hostels under RESCO (operational expenditure) model.

**SRRAS:** As a prelude to the National Solar Mission of Government, the requirement of accurate, reliable and validated data on solar irradiance is of utmost importance. National Institute of Wind Energy [earlier known as Centre for wind Energy Technology (C-WET)] an autonomous Institute of Ministry of New and

Renewable Energy (MNRE), Govt. of India has established 51 Solar Radiation Resource Assessment Stations (SRRAS) in different parts of India.

One of the 51 SRRAS was installed and commissioned from 15th June, 2011 at our college premises to collect the various parameters related to solar radiations of Ajmer city. The data will eventually be used for Solar Mapping and Monitoring (Sol Map) a project being supported by Federal Ministry for the Environment, Nature conservation and nuclear safety. The data available from SRRAS sites in conjunction with satellite derived products will provide a better overview of the solar resource assessment over different parts of India.

## SWAMI VIVEKANANDA CENTRAL LIBRARY



The fully computerized Central Library of Mahila Engineering College Ajmer is a treasure house of knowledge comprising an ever growing collection of around 40,994 books. All these valuable resources are well organized in the 923 Sq. Ft. Area, where more than 150 users can sit at a time and they are monitored by CCTV Cameras.

SV Central Library provides computer center facilities to students for Digital Lab with Internet, Reprography facility, Reference service. The Periodical Section of Central Library has subscription of 31 Indian Journals & Magazines. To aid these print versions of journals, library also has subscribed following online journals: Elsevier, (Science Direct: engineering and computer sci. 275 e-jr), ASME.

To fulfill the ever growing information thirst of our students and staff, Users can refer to these libraries.

- I. E-Shodhsindhu
- II. National Digital Library
- III. Other academic portals

Stock and services of the library are aimed to meet Undergraduate, Post Graduate & Research level study. Membership is open to all students and staff of SVCL on all working days from 09.00 am to 7.00 pm. To provide the latest facilities and environment to our users World Bank assisted projects viz.: TEQIP-II & TEQIP-III has provided financial and technical support for the betterment of Library facilities.

**Total number of books available in SVC Library:**

S. No.	Book Status	UG PROGRAMS	PG PROGRAMS	Total
01.	Library Books	13756	1328	15084
02.	Book Bank Books	21266	1920	23186
03.	SC/ST Book Bank	1120	-----	1120
04.	Book from CEG, Jaipur	1604	-----	1604
<b>Grand Total</b>				<b>40994</b>

**Books Purchased for SVC Library in session 2019-20:** For the session 2019-20 a total number of 81 Titles with a total volume of 1088 are procured under TEQIP-III.

**Journals/Magazine Subscribed (Print and e/online):** A total of 32 Journals/Magazine (Online & Print) are subscribed in the SVC Library to facilitate the students, faculty and staff.

**Digital Library:** Twenty Computers available for users to access e-journals and study material in the library and seven for office use.

**Library Management Software:** e-Granthalaya 3.0 library management software with OPAC facility.

**News Papers subscribed in Library:** A total of 11 regional and national newspapers with multiple copies are subscribed in the SVC Library.

**For more details please visit at:** <http://gweca.ac.in/Facilities>

## HOSTELS



Institute has its own four fully furnished hostels constructed in its campus to provide residential facility to the maximum number of students from outside and make them feel like a home away from home. The hostels inside the campus are:

1. **Mansi Hostel**
2. **Maahi Hostel**
3. **Raavi Hostel**
4. **Babu Jagjivan Ram Hostel**

The facilities provided to the hostel residents in campus are -

- Clean and hygienic mess for each hostel
- Safe drinking water facility with water purifiers and water coolers.
- Coolers and geysers for summer and winter seasons.
- Solar power plant to light up the entire hostel campus.
- Wi -Fi and ATM facility
- Canteen facility and Juice kiosk
- Library facility after college hours
- Stationery facility
- Basketball and volleyball courts
- Common rooms
- Centralized drinking water purifier plant
- Television in each mess

### **Future plans for campus hostels:-**

The college administration has planned for many more facilities for hostel students in near future. Some of the plans are as follows:

- Fully equipped Gymnasium
- Table tennis room
- Monthly sports and other co- curricular activities for hostlers
- 24\*7 Wi-Fi facility in Hostel
- Vending machine for Tea /Coffee.

**Hostel Administration:** Female Wardens and Caretakers for each hostel to look after the day to day problems of hostel students.

## DEPARTMENTS

### Electronics and Communication Engineering

The Department of Electronics and Communication Engineering was established in the year 2007. Since then, the department is positively working to produce confident, competent and multidimensional skilled engineering professionals. Keeping in pace with the phenomenal growth of electronics, the department aims at imparting an amalgamation of theoretical knowledge and practical expertise in basic electronics principles and semiconductor technology. There are 16 regular and 5 NPIU contract faculties working in the department along with 4 technical/support staff.

**Vision:** To impart education in the field of Electronics & Communication Engineering for young women to face the social & technical challenges and to develop leadership qualities according to the situations posed by the fast growing globalization.

**Mission:** Electronics & Communication Engineering Department was established with a threefold mission in teaching, research, and public service. Based on that foundation, the mission of the Department, in all major fields of Electronics & Communication engineering is:

1. To instill moral & social values in students that will develop the learning process throughout their life.
2. To develop the ability and passion to work creatively and efficiently for the benefit of the society.
3. To develop technical qualities & proficiency for the betterment of the society.
4. To provide realistic and innovative solutions for the current and future technological requirements.

**Programs:** There are five programs under Department of ECE

1. **Ph.D (Digital Communication)**
2. **M.Tech (Digital Communication) with intake of 24**
3. **B.Tech in ECE with intake of 60**
4. **B.Tech in Artificial Intelligence & Machine Learning with intake of 30**
5. **B.Tech in Internet of Things (IoT) with intake of 30**

### Major Laboratory Facilities of the Department:

S. No.	Name of the Laboratory
1.	Wireless Communication laboratory
2.	Microprocessor Laboratory
3.	Microwave Engineering Laboratory
4.	EMI Laboratory
5.	Industrial Electronics Laboratory
6.	LIC Laboratory
7.	Electronic Workshop Laboratory
8.	EDC and AE Lab
9.	Digital Electronics Laboratory
10.	VLSI and Optical Fiber Communication Lab
11.	Signal Processing Laboratory
12.	FPGA Laboratory
13.	RF Simulation Lab
14.	RF Fabrication Lab

### Additional facilities created for improving the quality of learning experience in laboratories:



S. No.	Facility Name
1.	Research Laboratory (Anechoic Chamber with All Equipments)
2.	Embedded system design Lab
3.	Project Lab

### Highlights of department infrastructure and facilities:

1. The department has 3 smart classrooms with projectors, flip boards, digital podium for interactive teaching learning.

2. The department has separate computer lab facility for PG students/scholars.
3. Dedicated laboratories with state-of-the-art equipment aligned to University curriculum and for research purposes.
4. The department has set-up an Anechoic Chamber for characterization and analysis of Antennas and various RF components, adding on to the research environment of the department.
5. The department has various latest licensed software such as CST Studio Suite and HFSS for 3D EM simulation, ADS for circuit simulation, MATLAB etc. design and research in various fields.

### **Highlights of Department's Achievements:**

1. All India Rank 80 (AIR-80) secured by Ms. Priyanka Bansal in GATE-2020 in ECE. Two other students also secured AIR 4078 (Ms. Ekta Singh) and AIR 9950 (Ms. Monika Choudhary).
2. Students participated in Smart India Hackathon (SIH) with innovative projects.
3. Students have been placed in various Organizations of repute with good packages.
4. The department has been affiliated to BTU as a Research Centre. This shall welcome various PhD scholars in the department and develop more research environment of the department.
5. The faculty members are actively working on various research projects. In 2019-20, three research projects are ongoing with a sponsored amount of around 25 lacs with support from AICTE/NPIU/MHRD & RTU.
6. The students and faculty members are actively engaged in various academic activities such as workshops, FDPs, Webinars, industrial visits, expert lectures etc.
7. There are various publications by faculty members and students in reputed journals, conferences and book chapters.
8. The faculty members are actively involved in the development of their profile in terms of academics and research by the means of organizing and attending workshops, trainings programs, webinars, expert lectures etc.
9. During the COVID-19 pandemic, faculty members prepared more than 450 e-lectures during the lockdown.

### **Highlights of Department's Activities:**

1. One day workshop on "Women in Engineering" was organized by the department of ECE in association with IEEE Rajasthan Subsection and Antenna & Propagation Society Chapter – Jaipur



2. One day Workshop on “Home Automation with Internet of Things (IoT)” was organized by the department of ECE in association with IHT Innovations Pvt. Ltd. Jaipur
3. School students of Govt. Girls Sr. Sec. School, Gulab Bari, Ajmer visited department of ECE and lab facilities of the department. The HoD-ECE and department faculty members motivated school students for Engineering in ECE at the institute.
4. An expert lecture on “Benefits of Programming” was delivered by Mr. Dhaval Vyas, Asst. Prof. & CC-TEQIP, Engineering College, Bharatpur.
5. Workshop on “Internet of Things” and “Android App Development” was organized by the department of ECE in association with TechKriti’20, IIT Kanpur.
6. Industrial visit of CEERI Pilani and BSNL Ajmer was coordinated by the department of ECE for its students to inculcate beyond academic experience to its students.
7. Webinar on "Effects of Use of Mobile phones and Towers on Human Life" and” Remedies of RF and Microwave Signals" was organized by the department of ECE in coordination with HBTU, Kanpur.
8. Two-day Technical Webinar on “Simulation and CO-simulations of RF modules using CST Studio Suite 2020.05” was organized by the department of ECE, GWEC Ajmer, MNIT Jaipur under the aegis of IEEE Rajasthan Subsection & IEEE APS Chapter – Jaipur in association with Jyoti Electronics, Ahmedabad.
9. One-week Lecture series on “Recent Trends on RF & its Applications” was organized by the department of ECE, GWEC Ajmer, MNIT Jaipur under the aegis of IEEE Rajasthan Subsection & IEEE APS Chapter – Jaipur.
10. Students of ECE along with some of the faculty members visited IIT Kanpur for attending Short Term Course on “RF, Microwaves and Antennas: Theory and Applications” conducted by department of Electrical Engineering, IIT Kanpur.

## Computer Engineering

The Department of Computer Engineering was established in the year 2007. Since then, the department is positively working to produce confident, competent and multidimensional skilled engineering professionals. Keeping in pace with the phenomenal growth of computer engineering, the department aims at imparting an amalgamation of theoretical knowledge and practical expertise in computer technology. There are 23 regular faculty and 3 NPIU contract faculty working in the department along with 4 technical/support staff.

**Vision:** To produce quality human resources in computing science for empowerment of females.

**Mission:**

1. To transfer fundamental knowledge on various subject areas and develop capability to analyse and solve new problems.
2. To provide state of the art laboratory facilities and exposure to practical aspects of various computer engineering principles and inculcate the ability to analyze, design, test and implement solutions to various problems in the field of computer engineering.
3. To provide opportunities to the students for improving interpersonal skills and holistic development, so they become professionally competitive and responsible citizens.
4. To provide ample opportunities for training and placement.

**Programs:** There are four programs under Dept. of Computer Engineering

1. **M.Tech in CSE with intake of 24**
2. **MCA with intake of 60**
3. **B.Tech in CSE with intake of 120**
4. **B.Tech in IT with intake of 60**

**Major Laboratory Facilities of the department:**

S. No.	Name of the Laboratory
1.	Software Engineering Lab (PARAM A LAB)
2.	Database Lab (PARAM B LAB)
3.	Digital Image Processing Lab (PARAM C LAB)
4.	Data Structure and Algorithms Design Lab (PARAM D LAB)
5.	Web Development Lab (New CC E Lab)
6.	Unix & Shell Programming Lab (New CC F Lab)
7.	Computer Programming Lab (New CC G Lab)
8.	Operating System Lab (New CC H Lab)
9.	Computer Graphics & Multimedia Lab (New CC I Lab)
10.	Project Lab (PG LAB)
11.	Virtual Computing Lab (Dedicated for MHRD Virtual Labs)
12.	Network Simulation Lab (NetSim Simulator)
13.	Deep Learning Lab

### **Additional facilities created for improving the quality of learning experience in laboratories:**

<b>S. No.</b>	<b>Facility Name</b>
1.	Spoken Tutorial Education
2.	Online Examination
3.	Labs Open in Extra Hours
4.	Workshop & Training Program
5.	Seminar Hall
6.	Videos From NPTEL

### **Highlights of the department infrastructure and facilities:**

1. Department has six smart classrooms.
2. Department has two computer centres well-equipped with more than 350 latest computers, seating facility, air-conditioning and surveillance.
3. All the lectures halls are spacious and equipped with projectors for visually stimulated learning.
4. Specific labs have been prepared aligned to the University curriculum.
5. Department has a Deep learning server for the purpose of in-depth data analytics in the fields of image processing, networking, signal processing, etc.
6. Department has a dedicated lab for the simulation of large and complex computer networks including Wireless Sensor Networks and IoT through the latest version of NETSIM simulation software.
7. Students are trained on Image Processing and other relevant fields through the latest licensed MATLAB version-2020 with all important toolboxes.
8. Department manages the Internet and Wi-Fi facility of the whole campus.

### **Highlights of students' achievements:**

1. More than 50% of the students have been placed in Industries with an average package of about 3.8 Lacs during the session 2019-20 even after last semester difficulty of COVID-19 outbreak.
2. Free training for GATE as well as for other competitive exams was given to the interested students sponsored by TEQIP-III project. GATE registration fee is also reimbursed for all the students.
3. Faculty members and students of the department actively participate in Swayam NPTEL, Coursera, Internshala MOOC courses for enhancement of teaching-learning process, some of them are Gold certified.
4. Students had visited more than 15 renowned industries all over India during academic breaks with full sponsorship from TEQIP-III.

5. Students participated in Smart India Hackathon 2019 with innovative software and hardware projects.
6. Students participated in various sports activities of National level and secured top positions. Participated in sports events at IIT Mandi, IIT BHU, DTU, New Delhi, etc.
7. More than 15 workshops/ seminars have been conducted for the students on the latest technologies to build competitive edge and induce industry readiness.
8. More than 10 papers in journals and conferences have been published by the students under supervision of faculty members.
9. Students actively participate and organize inhouse and periphery social, cultural and co-curricular events such as blood donation camps, campus cleaning and plantation activities, wall-painting, techno-cultural fest, etc.

#### **Highlights of faculty members achievements:**

1. All the faculty members are thoroughly trained in using Digital Pedagogical techniques using Flip-boards, Smart Classrooms and some of them have also organized training for other departments.
2. Faculty members have been resource persons to various organizations of repute.
3. Faculty members attend training on the latest technology to remain updated and transfer learning to the students.

#### **No effect on study due to COVID-19 outbreak hindrance:**

1. During the institution lock-down due to COVID-19 outbreak the faculty members of the department took more than 400 E-lectures which have more than 15000 views over Youtube and other mediums.
2. Faculty members have also been conducting live interactive classes, remedial classes for doubt solving as well as shared lecture notes to the students.
3. Department emphasizes the use of virtual labs, for this a dedicated lab facility has been developed in the computer centre. Students were trained for simulating practical experiments through Virtual Labs.
4. The practical exams, quizzes, mid-terms were taken online and students participated with enthusiasm.

#### **Department Contribution in Research:**

1. Research funding of more than 16 Lacs have been obtained by faculty members of the department for the purpose of research in the field of Smart

City, Health Monitoring and IoT from RTU, AICTE, and MHRD under TEQIP-III.

2. More than 15 international journal and conference publications have been produced by the faculty members.
3. Faculty members and students also presented papers in International Conferences.

## Electrical Engineering

The Department of Electrical and Electronics Engineering was established in the year 2007. In compliance with the decision of the Board of Governors, it has now been renamed as Department of Electrical Engineering. The department is positively working to produce confident, competent and multidimensional skilled engineering professionals. Keeping in pace with the phenomenal growth of electrical engineering, the department aims at imparting an amalgamation of theoretical knowledge and practical expertise in basic electrical principles and technology. There are 6 regular faculty and 7 NPIU contract faculty working in the department along with 3 technical/support staff.

**Vision:** To strive continuously for excellence in the field of Electrical Engineering producing valuable human resources for sustainable development of industry and society.

**Mission:** To impart fundamental knowledge of Electrical, Electronics and Computational Technology.

1. Develop the foundation to undertake research in the system involving emerging fields of Electrical Engineering.
2. To create an ambience of academic excellence which aims to flourish innovative ideas and research.
3. To instill professional skills and competence in the students so as to enable them to become experts in the field of Electrical Engineering.

**Programs:** There are three programs under department of Electrical Engineering:

1. **M.Tech (Power System) with intake of 24**
2. **B.Tech in EE with intake of 60**
3. **B.Tech. in EEE with intake of 120**

### Major Laboratory Facilities of the department:

S. No.	Name of the Laboratory
1.	Electrical Machine laboratory
2.	Power System laboratory
3.	Control System Laboratory
4.	EMI Laboratory
5.	Power Electronics and Advance Power Electronics Lab
6.	PSMS Lab
7.	Electrical Drives and Control

### Additional facilities created for improving the quality of learning experience in laboratories:

S. No.	Facility Name
1.	Research Laboratory
2.	Project Lab

### Major activities and achievements of the Electrical Engineering department in session 2019-20:

1. Electrical Engineering Department collaborated with faculties of NIT's and Institutes of National importance through collaborative research scheme (CRS) with the help of TEQIP-III project to enhance the research and infrastructure capabilities of the department.
2. Department Generated a fund of approximately 46.9 Lakh through 4 CRS projects from AICTE and NPIU, which will be used to improve the infrastructure and research facilities.
3. Department facilitated free GATE exam coaching to the students of EE and EEE to improve the competitive skills of students for the competitive exams.
4. To enhance the Industrial exposure, the department organized the industrial visits to major industries like Goa shipyard, Adtron Technologies, JMRC Jaipur, Parle foods etc.
5. For Student Internship support and guidance, department formed Industry Institute Interaction cell (IIIC) of the department to improve the industry exposure.
6. Department improved its infrastructure through Smart class rooms to improve the interaction with students.

7. Department procured latest lab equipment and research equipment through TEQIP-III project to enhance the research capabilities of the department.
8. Department conducted the online classes and delivered video lectures during the COVID-19 pandemic lockdown to complete the academic work.
9. Department also conducted the online remedial classes during the COVID-19 pandemic lockdown to improve the slow learning students.
10. Three students from EE and two students from EEE achieved good ranks in GATE Exam.
11. Electrical department students have participated in the placement drive of TCS, Capgemini, Mahindra and Mahindra, Epirock Mining etc. and students are offered job offers by the companies. Ten students are placed in reputed companies through campus placement drives.
12. Department faculty members presented papers in various national and international conferences and published papers in reputed journals.
13. Department provided financial support to the faculty members and students who attended various conferences / workshops / seminars /FDP etc. through TEQIP-III project.

## Mechanical Engineering

The Department of Mechanical Engineering was established in the year 2013. Since then, the department is positively working to produce confident, competent and multidimensional skilled engineering professionals. Keeping in pace with the phenomenal growth of mechanical engineering, the department aims at imparting an amalgamation of theoretical knowledge and practical expertise in the principles of mechanical engineering. There are 2 regular faculty and 3 NPIU contract faculty working in the department along with 2 technical/support staff.

**Vision:** To excel both in teaching and research, by producing high competence, proficient, ethical and self-reliant female mechanical engineers for technological growth of the nation.

**Mission:** The Mechanical Engineering Department was founded with a threefold mission in teaching, research, and public service. Based on that foundation, the mission of the Department, in all major fields of Mechanical engineering is:

1. To provide efficient mechanical engineers for global requirements by imparting quality education.
2. To emphasize on practical skills and socially relevant technology.

3. Most of the students, who graduate from the department, end up taking leading positions in industry, academia and government in both India and abroad.

### Programs:

#### 1. B.Tech in ME with intake of 60

### Major Laboratory Facilities of the department:

S. No.	Name of the Laboratory
1.	Basic Mechanical Engineering Workshop Lab
2.	Fluid Mechanics Lab
3.	Thermal Engineering engine lab
4.	Production Engineering Lab
5.	Engineering Drawing Lab

The Department of Mechanical Engineering regularly organises workshops, short term courses, faculty development programs and industrial visits and finishing school programs for knowledge upgradation and skill enhancement of the faculty, staff and students.

Most of the department's alumni are currently working in reputed MNCs and also pursuing higher education in India and abroad.

### Major activities and achievements of the department in session 2019-20:

1. To enhance the Industrial/ practical exposure, the department organizes the industrial visits and expert talks/lectures/meetings.
2. The Industrial Consultation Committee has been constituted in the department including members from various industries such as Rolls Royce, Mercedes Benz, Paytm etc. Experts delivered an interactive session to faculty and students.
3. Department conducted the online classes and delivered video lectures during the COVID-19 pandemic lockdown.
4. Department also conducted the online remedial classes during the COVID-19 pandemic lockdown. Also the faculty members provided the guidance for GATE and Employability skills.
5. Department faculty members and students attended various conferences / workshops / seminars / STTP / STC etc. Even during the COVID-19 pandemic lockdown department faculty members and students participated in more than 100 online courses, quizzes, workshops etc.



6. Faculty members have delivered expert / invited talks in various institutes in FDP/STC etc.
7. Department faculty members presented papers in various national and international conferences.
8. MOUs have been signed with various industries for internship, training, placement, industrial visits and industry oriented activities like workshops, expert talks, etc and more are under process.
9. One final year student has qualified GATE-2020 with AIR under 6000.
10. The student of the first batch of Mechanical Engineering (Ms. Mahima Agarwal) has been selected as Technical Officer in Indian Air Force (Through AFCAT). She was one of three students selected for this post. She is currently posted as a Flying Officer in Indian Air Force.
11. Mechanical engineering students have participated in the placement drive of TCS, NBC, Saint Gobain, Mahindra and Mahindra, Epirock Mining etc. and students are offered job offers by the companies.

## Humanities and Sciences

The Department of Humanities and Sciences comprises faculty from Physics, Chemistry, Mathematics, English and Management streams. The department acts as a bridge between the basic sciences and engineering procedures by providing fundamental knowledge to the engineering graduates of various streams. The department takes pride in inculcating human values and enhancing the communication skills of engineering students. There are 18 regular faculty and 3 NPIU contract faculty working in the department.

**Vision:** To train students in basic sciences and human values and prepare them for advanced studies in Engineering.

**Mission:**

1. To make the competent motivated engineers and scientists by imparting training to apply knowledge in the field of basic sciences and humanities
2. To train the students of Engineering in written and oral communication using Communication Technology tools.
3. To help students to move forward with a collaborative initiative to achieve all round excellence with social cohesion and harmony.
4. To disseminate the scientific outcome through Co-curricular activities for the benefit of society.

### Major Laboratory Facilities of the department:

S. No	Name of Laboratory
1.	Engineering Chemistry Laboratory
2.	Language Laboratory
3.	Engineering Physics Laboratory

## NBA ACCREDITATION AND ACADEMIC AUTONOMY

The present status of NBA Accreditation of various programs is as given in table below:

Name of Programme	SAR Uploaded (Yes/No)	Present Status
Computer Engineering	Yes	Awaiting the visit of NBA team
Electronics & Communication Engineering	Yes	
Electrical & Electronics Engineering	Yes	
Electrical Engineering	Yes	
Mechanical Engineering	Yes	
Information Technology	Yes	

The Institute will apply for academic autonomy after obtaining NBA accreditation.

## STUDENT STRENGTH

Branch	Students Intake	Students Admitted				Gen	SC	ST	OBC	Total
		I	II	III	IV					
CSE	120	114	101	117	119	266	40	11	134	451
IT	60	15	6	13	25	41	5	0	13	59
ME	60	5	8	18	27	21	11	5	21	58
ECE	120	10	9	22	54	59	5	3	28	95
EEE	120	3	9	10	35	23	14	1	19	57
EE	60	35	36	52	60	53	36	29	65	183
M.Tech	24	4	1	NA	NA	5	0	0	0	5
CSE										

M.Tech	24	2	1	NA	NA	3	0	0	0	3
PS										
M. Tech	24	0	3	NA	NA	3	0	0	0	3
DC										
MCA	60	5	6	22	NA	25	1	0	7	33

## FACULTY POSITIONS

1.	<b>Regular faculty</b>	<b>65</b>
2.	<b>NPIU contract faculty</b>	<b>21</b>

## EXAM RESULT AND TRANSITION RATE

The Even-Semester Examination schedule is awaited due to COVID-19 pandemic. Transition rate of UG Students will be calculated by the respective section after completion of examinations and declaration of results.

## GATE EXAMINATION-2020

Qualifying in Graduate Aptitude Test in Engineering (GATE) is a mandatory requirement for seeking admission and/or financial assistance to: (i) Master's programs and direct Doctoral programs in Engineering/Technology/Architecture and (ii) Doctoral programs in relevant branches of Science, in the institutions supported by the MHRD and other Government agencies. Even in some colleges and institutions, which admit students without MHRD scholarship/assistantship, the GATE qualification is mandatory. Further, many Public Sector Undertakings (PSUs) have been using the GATE score in their recruitment process. To enable students to crack the GATE with an impressive score, the institute has started free of cost in-house GATE classes by hiring an external agency.

## GATE-2020 RESULT:

Branch	Total number of students						Best 5 AIR
	Appeared	Trained under TEQIP	Qualified	having AIR			
				<5k	<=10k	>10k	
Computer Engineering & Information Technology	82	76	5	2	1	2	312, 7577, 10281, 24910, 6046
Mechanical Engineering	22	21	2	0	1	0	5803
Electrical Engineering	41	45	3	0	0	3	24309, 13325, 29405
Electrical & Electronics Engineering	19	22	2	0	1	1	6105, 26146
Electronics & Communication Engineering	40	25	3	2	1	nil	80, 4000, 9950

## TEQIP-III

Mahila Engineering College Ajmer is the beneficiary of the World Bank assisted TEQIP-III project. Earlier it was part of the TEQIP-II project as well. Each TEQIP project has funded Rs. 10 crore to the institute for staff and student development as well as lab procurement.

Mahila Engineering College, Ajmer is honoured to be a droplet contributor in the prestigious World Bank Project, Technical Education Quality Improvement Program (TEQIP) phase III where we are enthusiastically working towards attaining sustainable development through girl education and empowerment.

### **New Labs Development, Modernization/ Up-gradation of Existing Laboratories/ Classrooms /Supporting Departments:**

1. Eight New Laboratories are developed for students to impart practical knowledge about their subject under the project.
2. Twelve Laboratories are upgraded/modernized so that students can do experiments with the help of new equipment.
3. Thirteen Classrooms are modernized by installing digital boards for digital teaching-learning and Eight Smart Classrooms are developed under the

- project for effective teaching/ learning.
4. Nine Supporting departments in the institute are modernized in order to provide staff members a proper working environment.
  5. Two Computer Centres are developed in the institute.

#### **Academic Upliftment of Faculty Members:**

1. **Workshops/STC/FDP/PDTs for Faculty Members** - More than 50% faculty members have attended Workshops/STC/FDP/PDTs in the session 2019-20 under TEQIP-III and have gained knowledge in their fields and they impart the same knowledge to their students.
2. **Qualification Upgradation** - 20 Faculty members from the institute have been benefited with Qualification Upgradation under TEQIP-III.
3. **Learning through MOOCs** - 29 Faculty Members have been benefited with online NPTEL and SWAYAM Courses.

#### **Academic Upliftment & Overall Development of Students:**

1. **Induction Programs** - Induction Program was organized for 1st Year Students of 21 days in order to brief them about college activities, culture, and various departments, to comfort them in the college environment.
2. **GATE Training** - GATE Training is provided under TEQIP-III to Final year and pre final year students to make them ready for competition exams and placement drives.
3. **Industrial Visits** - 5 Industrial Visits are organized for students at various industries to give them knowledge about their working environment and some practical knowledge about their field.
4. **Expert Lectures** - 37 Expert Lectures has been organized for students under TEQIP-III for improving their learning and extra knowledge about their disciplines.
5. **Internships** - Students are benefited under Project for Internship in vacations at various industries/companies as per their convenience.

#### **Activities Organized under TEQIP-III:**

1. Six workshops on different topics, one summer training programs for students have been organised under TEQIP-III
2. Various activities were organized for students, faculties and staff under Mentor- Mentee Collaboration. Mentor with Dr. B.R. Ambedkar National Institute of Technology, Jalandhar.

## TRAINING PROGRAMS HELD FOR THE STUDENTS (INCLUDING COLLABORATIVE ACTIVITIES)

S. No.	Venue	Title of Program	No. of Students
1.	NITJ	Emerging Trends in Industrial Systems (In Collaboration with NITJ)	4
2.	NITJ	Quality Reliability and Maintainability Aspects in Industry (In Collaboration with NITJ)	11
3.	NITJ	Machine and Deep Learning in Computer Vision (In Collaboration with NITJ)	10
4.	IIT Kanpur	"RF, Microwaves and Antennas " Theory and Application	34
5.	IIT Delhi	Raspberry Pi and Python Based Automation System Design	3
6.	MNIT, Jaipur	RF and Microwave Components: Design Challenges and their Solutions	1
7.	IIT Bombay	1-Cyber Security 2-Data Analytics	3
8.	IIT Ropar	Machine Learning & Artificial Intelligence	3
9.	IIT-BHU	Machine Learning Artificial Intelligence (Technix 2020)	7
10.	MNIT, Jaipur	Design, Control and Operation of Flexible Microgrid With Opportunities and Challenges	1
11.	IIT Kanpur	Business and Technical Events in TECHKRITI	2
12.	IIT Roorkee	Android Application Development	1
13.	IIT Kanpur	Technovation Competition (Techfest Competition and shortlisted for Technical project presentation)	3

## TRAINING PROGRAMS HELD FOR TEACHERS

S. No.	Title of Program	Venue	No. of Teachers
1.	Renewable Energy in Science, Engineering & Technology-2019	NIT Srinagar	5
2.	Applied Deep learning	IIT Mandi	1
3.	Admission Process in PhD	NIT Jalandhar	1

4.	Universal Human Values and Professional Ethics	CET Bikaner	2
5.	Matrix Inequalities and its Application	NIT Uttarakhand (MNIT Jaipur Campus)	1
6.	New Education Policy	MNIT Jaipur	5
7.	Electromagnetics Metamaterials: Microwave-Infrared-Optical Applications	IIT Kanpur	1
8.	Power Electronics for Renewable Energy and Electric Vehicles	MNIT Jaipur	2
9.	Instrumentation Techniques for Research in Chemical Sciences	Sophia Girls College Ajmer	2
10.	"RF, Microwaves and Antennas Theory and application"	IIT Kanpur	9
11.	Robotics for Healthcare	North Eastern Hill University, Shillong, Meghalaya	5
12.	Data Analytics Machine Learning with Python	Goa Institute of Management Goa	1
13.	RF & Microwave Components: Design Challenges & Their Solutions	MNIT Jaipur	1
14.	Python Programming	CEG Jaipur	4
15.	Research Methodology and Data Analytics Tools	IEI Rajasthan, State Center, Jaipur	1
16.	Energy Simulation	Shri Mata Vaishno Devi University, Katra	1
17.	Recycling Through Green Technology	CEG Jaipur	3
18.	Arm Architecture and System-on-Chip (SOC) Design	IIT Goa	3
19.	AICTE-UKIERI 2ND TRAINING	Jodhpur, Rajasthn	2
20.	Track 1 Power Electronics Control and Machines for Microgrid System and Renewable	IIT Goa	2
21.	Track 2 "Advanced Signal Processing Techniques in Imaging Radar and 5G Communication Network	IIT Goa	3
22.	AICTE-Training & Learning (ATAL) Academy Sponsored Program on	NPTI, Alappuzha, Kerala	3

	Internet of things (IOT)		
23.	Deep Learning: An Emerging Technology	Engineering College Ajmer	1
24.	Office Automation	CEG Jaipur	1
25.	Universal Human Values and Professional Ethics	UCET Bikaner	1
26.	Challenges for Electronic Commerce	CEG Jaipur	5

## TRAINING PROGRAMS HELD FOR STAFF (INCLUDING COLLABORATIVE ACTIVITIES)

S. No.	Title	Venue	No. of Staff
1.	Staff Development Programme on Network Cum Linux System Administration	CEG Jaipur	3
2.	Staff Development Programme on Effective office Management Skills	NIT (J) In collaboration with NITJ	10
3.	Staff Development Programme on Office Automation	CEG Jaipur	2
4.	Enhancing Performance of Staff	NITTTR Chandigarh	10

## INTERNSHIPS AND IIC CELL

The institute is focusing on Industry-Institute-Interaction. The details for Industry-Institute-Interaction Cell (IIC), Women Engineering College Ajmer are as follows (Session 2019-20):

1. Students of the college have attended online summer internships due to COVID-19. These online internships are provided to the students free of cost by various platforms such as Internshala, Coursera, TCSiON etc.
2. More than 900 courses have been successfully completed till June 15, 2020 by the students and faculties on Coursera as per the report received from the Coursera. Total unique learners on Coursera from WEC Ajmer in session 2019-20 are 529.



3. More than 10 internship drives (ON campus) were organized for the students since January 2019. Six Industrial visits were organized to enhance the practical exposure. To enhance the placement of the students in the industry, Employability Skill Training was organized for the students
4. To enhance the industrial interaction and support the students for internships/training financial aid were provided to the students in session 2019-20 for the internships/training held in session 2018-19
5. Four (4) MOUs have been signed with various industries for internship, training, placement, industrial visits and industry oriented activities like workshops, expert talks, etc and three more are under process.
6. Thirty (30) campus placement/Internship drives (ON campus/Off campus/pool campus) were organized for the students. Also 105 jobs have been offered through these drives.
7. To enhance the Industrial/ practical exposure Industrial visits and Expert talks/lectures/meetings were held with industry experts.
8. Departments have been established at the Industrial Consultation Committee at department level to identify the industry need/requirement from the future engineers.
9. Principal, Registrar and TPO/III-Cell team members attended the various HR Conclave and TPO-HR meets from time to time.

## PLACEMENTS

The placement status for the session 2019-20 till date 19/06/2020, Company and branch wise is as given in the table below:

### COMPANY AND BRANCH WISE PLACEMENT DETAILS 2019-20

S. No.	NAME OF COMPANY	CSE	EE	EEE	ECE	IT	ME	M C A	M. Tech.	Tot al	PACKAGE
1.	Sopra Steria, New Delhi	3	0	0	0	0	0	0	0	3	4.0 LPA
2.	Synoriq Jaipur	2	0	0	0	1	0	0	0	3	3.7 LPA
3.	Ericsson Global	15	0	2	5	1	0	0	0	23	3.75 LPA
4.	Tech Mahindra (ComViva)	1	0	0	0	0	0	0	0	1	6.6 LPA
5.	Capgemini	8	1	1	2	0	0	0	0	12	3.8 LPA

6.	IBM	13	0	2	2	1	0	0	0	18	4.25 LPA
7.	TCS	6	0	0	2	1	0	0	0	9	3.6 LPA
8.	Metacube	2	0	0	0	0	0	0	0	2	4.5 LPA
9.	Collabera	1	1	0	1	0	0	0	0	3	2.4 LPA
10.	ZARO Education	1	0	0	0	0	0	0	0	1	12 LPA
11.	Mahindra & Mahindra	0	1	0	1	0	0	0	0	2	6.5 LPA
12.	Cyntexa	2	0	0	0	0	0	0	0	2	2.88 LPA
13.	Motherson Sumi	2	0	0	0	0	0	0	0	2	3.5 LPA
14.	Elevation Technology	0	0	0	0	0	5	0	0	5	2.4 LPA
15.	MTX	3	0	0	0	0	0	0	0	3	6.5LPA
16.	INFOSYS	0	0	0	1	0	0	0	0	1	3.6LPA
17.	INTECON S	2	0	0	0	0	0	1	0	3	
18.	Epiroc Mining	0	1	1	0	0	1	0	0	3	5LPA
19.	Tesca Technologi es	0	0	0	1	0	0	0	0	1	2.4LPA
	<b>Total</b>	<b>64</b>	<b>4</b>	<b>6</b>	<b>15</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>105</b>	

## RESEARCH AND DEVELOPMENT (PROJECTS AND ACHIEVEMENTS)

**Sponsored Projects:** The following are the project list funded by DST, RTU and AICTE respectively:

**Under RTU:** The faculty members of the college received five projects in capacity of PI (under TEQIP-III) and two in capacity of Co-PI.

### **R & D PROJECTS under RTU:**

<b>S. No.</b>	<b>Name of PI</b>	<b>Name of Co-PI</b>	<b>Project Title</b>	<b>Amount (In Rs.)</b>
1.	Dr. Prashant Kriplani (Chemistry, WEC Ajmer)	1. Dr. Ajay Sharma, EC Jhalawar 2. Dr. Seema Maheshwari, WEC Ajmer	Green Synthesis of biologically active drugs containing thiazoles using ionic liquid	200000
2.	Dr. Rakhi Khandelwal (Chemistry, WEC Ajmer)	1. Dr. Chanchal Kachhawa, EC Bikaner	Green Synthesis for Silver Nanoparticles for Solar Cell Applications	200000
3.	Mr .Saurabh Maheshwari (CSE, WEC Ajmer)	1. Mr .Vinesh Jain, EC Ajmer 2. Dr. Anil K Tiwari, IIT Jodhpur	Development of convenient and accurate method for sleep Quality Estimation	240000
4.	Dr. Shyam Sunder Sharma (Physics, WEC Ajmer)	1. Dr. K.B. Rana, RTU Kota 2. Dr. Rahul Singhal, MNIT Jaipur	Large area and High Yield scalable Synthesis of graphene by Electrochemical Exfoliation for Dye Sensitized solar Cells (DSSCs)	200000
5	Dr. Vijay Sharma (Physics, WEC Ajmer)	1. Prof. Dharendra Mathur, RTU Kota 2. Dr. J.K. Deegwal, Principal, WEC Ajmer	Design and Analysis of Some Novel Patch Antenna Geometry for Fifth-Generation Wireless (5G) Communications'	200000
6	Dr. Garima Mathur (ECE, PCE, Jaipur)	1. Dr. Sanjeev Yadav, WEC Ajmer 2. Dr. Ritu Sharma, MNIT Jaipur	Blood Flow Detection and Monitoring Using Sensory Data	240000
7.	Dr. Mahesh Jagid, (Physics, VIT, Jaipur)	1. Dr. Shyam Sunder Sharma, WEC, Ajmer	Preparation and Characterization of Mg -M (M=Ni, Ti & Al) thin film metal hydrides for hydrogen storage Application.	200000
			<b>Total</b>	<b>1480000</b>

### **R & D PROJECTS under AICTE:**

<b>S. No.</b>	<b>Name of PI (Dept.)</b>	<b>Project Title and Amount</b>	<b>Name of CO-PI from Host Institute</b>	<b>Name of CO- PI from NIT</b>	<b>Amount</b>
1.	Mr.Srinivas Yelisetti (EE, WEC, Ajmer)	Building Energy Optimization using Machine Learning Technique	Mr. S.N. Joshi Mr. Sandeep Manda Mr. Balvinder Singh	Prof. Rajesh Kumar (MNIT Jaipur)	414000
2.	Dr. Mohd. Saalim Qureshi (EEE, WEC, Ajmer)	Intelligent Control Techniques for Robotic Manipulator in the application of Robotic Assisted Surgery	Mr. Pushpendra Singh	Dr. Pankaj Swarnkar (MA-NIT Bhopal)	1437000
3.	Ms. Renuka Kamdar (EE, WEC, Ajmer)	Development of Renewable Integrated Smart Micro Grid Console with Intelligent Controller	Mr. Pushpendra Singh	Dr.Priyanka Paliwal (MANIT) Dr. Tripta Thakur (MANIT) Dr. Rohit Bhaskar (MNIT Jaipur)	1732000
4.	Mr.Sandeep Manda (EE, WEC, Ajmer)	A Battery Swapping Approach for Planning of Electric Bus Charging infrastructure	Mr. Balvinder Singh Dr. J.K. Deegwal Mr.Srinivas Yellisetti	Prof. Rajesh Kumar (MNIT Jaipur)	1107000
5.	Dr. Ashok Kumar (ECE, WEC, Ajmer)	Design and Development of Ultra fast wireless Optical Communication Link for Secure Underwater Communication	Dr. J.K. Deegwal Dr. Ajay Yadav	Dr. Ghanshyam Singh (MNIT Jaipur)	755000
6.	Mrs. Kamini Singh (ECE, WEC, Ajmer)	Designing a highly efficient, multi brand rectenna for energy harvesting in remote areas	Dr. J. K. Deegwal Dr. Sanjeev Yadav	Prof. M.M. Sharma (MNIT Jaipur)	132000

7.	Mr. Nikhil Yadav (ME, WEC, Ajmer)	Investigation of Musculoskeletal disorders and Ergonomic design of workplace for pregnant women	Mr. Yashvin Gupta	Dr. M.L. Meena Dr. Rahul Jain Prof. G.S. Dangayach (MNIT Jaipur)	1372000
8.	Mr. Balram Choudhary (ME, WEC, Ajmer)	Nonlinear Dynamics and stability assessment for rotor stator interaction in high speed and light-weight aircraft engines.	Dr. Jai Gopal Gupta Mr. Yashvin Gupta	Dr. Barun Pratiher	973000
9.	Mr. Utsav Upadhyay (CE, WEC, Ajmer)	Data analytics and IoT framework for freeway to emergency services and traffic policing in Smart Cities	Mr. Saurabh Maheshwari	Dr. Geeta Sikka (NIT Jalandhar)	1161000
10.	Dr. L. Avinash (H&S, WEC, Ajmer)	Small Molecule fluorescent probes for amyloid beta for the detection of Alzheimer's disease	Dr. Seema Maheswari Dr. Prashant Kriplani	Dr. S. Choudhary, MNIT Jaipur Dr. A.K. Sharma, CU Rajasthan	1830000
11.	Dr. Anu Singh (H&S, WEC, Ajmer)	Study the radiation damage effects in Silicon Detectors.	Dr. Gaurav Saxena	Dr. Kavita Lalwani (MNIT Jaipur)	1503000
				<b>Total</b>	<b>12416000</b>

## CONFERENCES ATTENDED

S. No.	Name of Faculty	Title of Conference	Venue
1	Mr. Ankur Pokhara	23rd International Symposium on VLSI Design and Test (VDAT-2019)	IIT Indore
2	Dr. Mahesh Bohra	Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAAC19)	JECRC University, Jaipur
3	Ms. Shalini Agarwal	Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAAC19)	JECRC University, Jaipur

4	Dr. F. B. Sharma	Presenting Paper	RIET Bhankrota, Jaipur
5	Dr. Anu Singh	Condensed Matter & Applied Physics (ICC 2019)	Govt. Engineering College, Bikaner
6	Dr. Rakhi Khandelwal	Condensed Matter & Applied Physics (ICC 2019)	Govt. Engineering College, Bikaner
7	Dr. Shailja Tiwari	VII Rajasthan Science & Technology: Facing The Challenges and Creating Opportunities (RSC-2019)	Mohanlal Sukhadia University, Udiapur
8	Ms. Madhu Toshniwal	Recent Trends in Environment and Sustainable Development (RTESD-2019)	Vivekananda Global University, Jaipur
9	Dr. Seema Maheshwari	Recent Trends in Environment and Sustainable Development (RTESD-2019)	Vivekananda Global University, Jaipur
10	Dr. Mahesh Bohra	Special Functions & Application (ICSFA-2019)	Govt. College of Engg. & Tech. Bikaner
11	Mr. Nikhil Yadav	Humanizing Work and Work Environment (HWWE-2019)	NIT Jalandhar
12	Dr. Sanjeev Yadav	2nd Indian conference on Antennas and Propagation (InCAP) 2019	Ahmedabad
13	Mr. Pushpendra Singh	Power System 2019 (ICPS 2019)	MNIT Jaipur
14	Dr. Shyam Sunder Sharma	107th Session of Indian Science Congress	University of Agricultural Science, Bangalore
15	Ms. Neetu Rathore	Socio-Cultural Dynamics in the Globalized World (NCSCDGW-2020)	Shri Bhawani Niketan Mahila P. G. Mahavidyalaya (SBNMM), Jaipur
16	Dr. Ganga Brahma	11th International Conference of the North East Indian Linguistics Society (NEILS II)	CIT Kokrajhar

## START-UP AND INNOVATION: INCUBATION CENTRE

Mahila Engineering College Ajmer is providing its students a unique platform in the form of Entrepreneurship Development Cell, Incubation Centre and Startup Cell. Young and budding entrepreneurs may take benefit by getting guidance as well as co-working space at Mahila Engineering College Ajmer for establishing and running a business venture of their own.

The main objectives of the Cell/Centre are as follows:

1. To develop an entrepreneurial ecosystem across the city (Ajmer).
2. To focus and promote women entrepreneurs across Rajasthan.
3. To provide co-working space in the incubation center to budding women entrepreneurs.

Mahila Engineering College Ajmer received its first installment of Rs. 10 lac funding on 20 July 2017. The incubation centre was inaugurated on 1 August 2017. Since then it's working to promote entrepreneurship. Till now centre has received a total of Rs. 20 lacs grant from Govt. of Rajasthan and Rs. 10 lacs of grant from DST.

## INTERNAL REVENUE GENERATION (FY 2019-20)

Revenue Head	Rs. in Lakh
Student FEE	604.8
Infrastructure and Human Resources (Govt. Grant)	0
Consultancy/Testing etc.	0
Financial (Interest earned from bank accounts etc.)	7.66
All other (Other Income Society)	0
<b>Total</b>	<b>612.46</b>

## EXTRA-CURRICULAR AND CO-CURRICULAR ACTIVITIES

**CREATIVE ARTS:** Focusing on the creative pursuits of the students, the creative art society strives to inculcate and enhance the creative skills amongst the students. The society devices and exhibits various events viz Debate, Musical Competitions, Trailblazers etc. throughout the academic year.

**GAMES AND SPORTS (TAKSH):** The year 2009 marked the journey of taksh – the annual sports week of G.W.E.C.A. Initially, a 5 day sports week used to be conducted which now has evolved into a grand sports fest and is celebrated annually. Along with students the faculty of college also participate actively in it with zeal and enthusiasm. It was started as a sports week for all, but gradually it has turned into an intra-college event where the branches of the college compete with each other as opposing teams.

An annual sports meet “TAKSH ” a three/ four days event is organized annually at Mahila Engineering College Ajmer. Kabaddi, Kho-Kho, Cricket, Volleyball, BasketBall,

100m/200m Race, Shot Put/Discuss, Wrestling, Chinese Checker, Kids Race, Carom, Chess, 400m Race, Badminton, 3 Legged Race, Long Jump/Triple Jump/High Jump, Relay Race, Throw Ball etc. are few of the games which are part of TAKSH.

### **Achievements in Games and Sports Session 2019-20:**

S. No.	Tournament Venue	Name of Game	Status
1.	IIT Mandi	BasketBall	Silver Medal
2.	IIT BHU	Kabaddi	Gold Medal

**VIVEKANAND STUDY CIRCLE:** Vivekananda Study Circle is a group which is dedicated to character building among the youth. Its motive is to awaken young minds and recognise the glory of our nation. Here students are encouraged to understand the teachings of Swami Vivekananda who sacrificed himself for the country and brought glory to the nation. His preachings especially his lectures in “Parliament of Religion” motivate young minds to attain an aim in life that is beneficial for both individual and national development. It not only focuses on inner development but also focuses on developing various personal skills like communication skills, expression skills, organizing and managing skills.

**ECO CLUB:** In a move to spread environmental awareness ECO CLUB has been constituted in the college to empower the stakeholders to participate and take up meaningful environmental activities and projects. The club aims at propagating the importance of keeping the environment clean and working towards environmental conservation and sustainable development. It is a forum through which students can reach out to influence and engage the stakeholders of the college to promote environmental and climate literacy and sensitize them to imbibe habits and lifestyle for minimum waste generation. The prime objective of the club is to empower students to explore environmental concepts and actions beyond the confines of academic curriculum.

**IOT CLUB:** IOT Club is designed to build projects utilizing the state of the art technologies being used in the field of IOT and robotics. The club provides opportunity to the members of the club to explore this field and work in an interesting world of IOT and embedded systems.

**TECHNICAL INNOVATION CLUB:** The Objective of the Technical Innovation Club is to keep students updated with the latest technologies and inventions by two-way communication. The communication takes place through power point presentations, poster presentations, etc. which will be helpful to develop technical as well as communication skills of the students. It creates awareness about research and develops a sense of research orientation among



students through different presentations, paper presentations by students who have participated in conferences/seminars, technical quiz competitions, group discussions on different technical events, query discussion on various technologies and so on.

**ISTE:** Indian Society for Technical Education (ISTE) Student Chapter of our college was inaugurated on 17 September, 2011. It provides a common platform for students to conduct many technical events in college. The main goal of ISTE is to serve as a common agency for stimulating and guiding its members to formulate the general goals and responsibilities of technical education for the service of mankind and advancement of general welfare. Under this chapter ISTE has organized many technical programs like seminars, expert lectures, classes on personality development etc. The total members of the student chapter from various branches are around 500.

**IETE:** The Institution of Electronics and Telecommunication Engineers (IETE) is India's leading recognised professional society devoted to the advancement of Science and Technology of Electronics, Telecommunication IT. The IETE focuses on advancement of the Science and Technology of Electronics, Telecommunication, Computers, Information Technology and related areas. Towards this end the Institution promotes and conducts basic engineering and continuing technical education programmes for human resource development.

**IEI & MESS:** Following student chapter has been started in the department of Mechanical Engineering:

- Student chapter of Institution of engineers, India (IEI) Kolkata in the branch of Mechanical Engineering.
- Mechanical Engineering Student Squad (MESS), a student society of Mechanical Engineering students for society, technical, cultural and corporate initiative. Different activities organized by this society.

**SPIC MACAY:** SPIC MACAY student chapter has been started in Institute for the promotion of Indian classic music, art and culture amongst youth. Various Lecture-Demonstrations have been organized. Music and dance classes are also organized under this chapter.

**EESO:** Electronics Engineering Students Organisation (EESO) was formed in September, 2016. EESO is a student's organization which works with the focus on organizing student centric learning activities which are managed, organised and conducted by the student body under guidance of the department.

**QUIZSEC - THE QUIZ SOCIETY:** QUIZSEC is a society devoted to quizzing in its entire form. The main objective of this society is to enhance the general

knowledge of the students studying in the college preparing them for competitive exams. This society is trying to inculcate regular newspaper and general reading habits in students.

**NPTEL:** National Programme on Technology Enhanced Learning (NPTEL) is an initiative funded by the Ministry of Human Resource and Development, Government of India and coordinated by IIT Madras and other IITs. The project's central idea is to put recorded lectures taught by its member institutes online for open access. It is one of the most extensive educational YouTube channels covering engineering, basic sciences, and some humanities and social science subjects. NPTEL local chapter was established for Mahila Engineering College, Ajmer on Nov 29, 2019.

**COURSERA:** Mahila Engineering College, Ajmer is part of COURSERA for campus programme from April 27, 2020. Students and faculty members enhance their skills by taking courses from world class instructors offered by world class universities. With a total of more than 20,000 lessons taken, more than 9,500 hours learning, 2,983 enrollments, and 895 courses are completed by learners at Mahila Engineering College, Ajmer. Here students get the opportunity to learn from world class instructions along with the university curriculum.

## CONTACT DETAILS

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**Why GWEC Ajmer?**

- More than 20 digital & smart-classrooms and lecture theaters
- More than 30 fully-equipped and modernized labs for various engineering disciplines
- More than 85 qualified faculty having degree from IITs, NITs and renowned institutions
- Multi-storey Library block with 40,000 rich book bank
- E-learning facility through digital smart boards
- Computer centres with 300 latest computers
- High-speed Wi-Fi enabled campus
- Scholarships under various Govt. schemes
- Dedicated Training and Placement Cell & Incubation centre for "Young Entrepreneurs"
- Free accommodation facility in hostel for SC students
- On-campus residential hostels and hygienic mess facility
- Online classes through E-lectures due to COVID-19
- Fully air-conditioned video conferencing hall & Seminar cum auditorium hall, central stage with lush-green campus, playgrounds, techno-cultural fest etc.