

SELF-ASSESSMENT REPORT (SAR)

Undergraduate Electrical Engineering Program (TIER-II)

Submitted to



**NBCC PLACE, 4th FLOOR EAST TOWER, BHISHAM PITAMAH MARG,
PRAGATI VIHAR, NEW DELHI-110003**

BY



DEPARTMENT OF ELECTRICAL ENGINEERING

RAJKIYA ENGINEERING COLLEGE, AMBEDKAR NAGAR, (U. P.) INDIA

**Akbarpur-Tanda Road, In Front of Hawaii Patti,
Katariya Yakoobpur, Ambekar Nagar-224122**

(AICTE APPROVED GOVERNMENT ENGINEERING COLLEGE)

DR. A. P. J. A. K. T. U., LUCKNOW (U. P.)

COLLEGE CODE : 737

SAR Contents

Serial Number	Items	Page No.
PART A	College Information	1
PART B	Criteria Summary	6
	Program Level Criteria	
1.	Vision, Mission and Program Educational Outcomes	7
2.	Program Curriculum and Teaching-Learning Processes	14
3.	Course Outcomes and Program Outcomes	53
4.	Students' Performance	68
5.	Faculty Information and Contributions	75
6.	Facilities and Technical Support	96
7.	Continuous Improvement	101
	Institute Level Criteria	
8.	First Year Academics	108
9.	Student Support Systems	122
10.	Governance, Institutional Support and Financial Resources	152
PART C	Declaration by the College	177

PART A: College Information

1. Name and address of College:

RAJKIYA ENGINEERING COLLEGE, AMBEDKAR NAGAR (REC, AMBEDKAR NAGAR), (U. P.) INDIA-224122

2. Name and Address of Affiliated University:

Dr. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW (U. P.)

3. Year of establishment of College:

2010-2011

4. Type of College:

University	<input type="checkbox"/>
Deemed University	<input type="checkbox"/>
Government Aided	<input checked="" type="checkbox"/>
Autonomous	<input type="checkbox"/>
Affiliated	<input checked="" type="checkbox"/>

5. Ownership Status:

Central Government	<input type="checkbox"/>
State Government	<input type="checkbox"/>
Government Aided	<input checked="" type="checkbox"/>
Self-financing	<input type="checkbox"/>
Trust	<input type="checkbox"/>
Society	<input checked="" type="checkbox"/>
Section 25 Company	<input type="checkbox"/>
Any Other (Please Specify)	<input type="checkbox"/>

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Table A.1: Information of other Academic Institute of the Trust /Society/Company

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
-	-	-	-

7. Details of all the programs being offered by the college under consideration:

Table A.2: Program offered by College

S. No.	Program Name	Year of Start	Intake	Increase in intake if any	Year of increase	AICTE Approval	Accreditation Status*
1.	B. Tech. in Civil Engineering	2010-11	60	No	NA	Approved	Applying*
2.	B. Tech. in Electrical Engineering	2010-11	60	No	NA	Approved	Applying
3.	B. Tech. in Information Technology	2010-11	60	No	NA	Approved	Applying

** Write applicable one:*

- Applying first time

8. Programs to be considered for Accreditation vide this application:

Table A.3: Program under consideration for Accreditation

S. No.	Program Name
1.	B. Tech. Electrical Engineering

9. Total number of employees in the College

A. Regular* Employees (Faculty and Staff):

Table A.4: Regular Employee Status of College

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	21	21	21	22	22	22
	F	-	-	-	2	2	2
Faculty in Mathematics Science & Humanities	M	8	8	8	9	9	9
	F	-	-	-	-	-	-
Non-teaching staff	M	-	-	-	-	-	-
	F	-	-	-	-	-	-

* **Means:**

- Full time on roll with prescribed pay scale. An employee on contract for a period of not less than two years AND drawing consolidated salary not less than applicable gross salary shall only be counted as a regular employee.
- Prescribed pay scales means pay scales notified by the Regulatory Authority/ Central Government and implementation as prescribed by the Central/State Government as the case may be. In case State Government prescribes lesser consolidated salary for a particular cadre then same will be considered as reference while counting faculty as a regular faculty.

CAY: Current Academic Year (2020-21)

CAYm1: Current Academic Year minus 1= Current Assessment Year (2019-20)

CAYm2: Current Academic Year minus 2=Current Assessment Year minus 1 (2018-19)

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):

Table A.5: Contractual Employee Status of College

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	10	10	6	6	5	5
	F	3	3	3	3	4	4
Faculty in Mathematics Science & Humanities	M	1	1	2	2	1	1
	F	-	-	-	-	1	1
Non-teaching staff	M	82	82	66	76	66	66
	F	10	10	8	10	8	8

Total number of Engineering Students:

Table A.6: Total number of Engineering Students in different sessions

Item	CAY	CAYm1	CAYm2
Total no. of boys	654	645	626
Total no. of girls	169	176	137
Total no. of students	823	821	763

10. Vision of the Institution:

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

11. Mission of the Institution:

1. To enhance knowledge and skills of students in science, technology and human behaviour that will serve the nation.
2. To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.

3. To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

12. Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of Institution:

Name	Prof. Vishal Singh Chandel
Designation	Officiating Director
Mobile No	+91-9451412201
Email id	director@recabn.ac.in

NBA coordinator, if designated:

Name	Dr. Sudhakar Tripathi
Designation	Associate Professor
Mobile No	+91-8544401883
Email id	stripathi@recabn.ac.in

NBA Co-coordinator, if designated:

Name	Mr. Amit Kumar Rai
Designation	Assistant Professor
Mobile No	7503334676
Email id	amitkrrai@recabn.ac.in

PART B: Criteria Summary

Name of the Program: B. Tech (Electrical Engineering)

Criteria No.	Criteria	Mark/ Weightage
Program Level Criteria		
1.	Vision, Mission and Program Educational Objectives	60
2.	Program Curriculum and Teaching – Learning Processes	120
3.	Course Outcomes and Program Outcomes	120
4.	Students' Performance	150
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	50
Institute Level Criteria		
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
Total		1000

CRITERION 1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60
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1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

1.1 State the Vision and Mission of the College and Department

(5)

Vision of the College

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

Mission of the College

- To enhance knowledge and skills of students in science, technology and human behavior that will serve the nation.
- To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.
- To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

Vision of Electrical Engineering Department

To impart knowledge in Electrical Engineering by upbringing globally competent engineers, innovators and entrepreneurs instilled with the human values and professional ethics.

Mission of Electrical Engineering Department

- To offer good quality education & research in Electrical Engineering.
- To provide the knowledge base and consultancy services to the rural and weaker section of the society for their upliftment and well-being.
- To bridge the gap between industry and academia by framing curricula and syllabi based on industrial and societal needs.

1.2 State the Program Educational Objectives (PEOs)

(5)

Program Educational Objectives (PEOs)

PEO 1:

To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences, Electrical Sciences and Engineering.

PEO 2:

To provide the intensive training for solving real time problems through engineering skills.

PEO 3:

To engage the students to learn and adopt new technologies to remain ahead in their profession and be leader in our technological vibrant society.

PEO 4:

To train the students to communicate effectively and work efficiently in team activities.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders

(10)

The Vision, Mission and PEOs are well published and disseminated as given below:

Table 1.1 a): List of stake holder and their relevance

Stack holders and their relevance		
Sr. No.	Name of stake holder	Relevance
1.	Students	<ul style="list-style-type: none">• Directly involved• Their placement will indicate the success of programme• Their feedback will help in improving the programme
2.	Faculty members	<ul style="list-style-type: none">• They are responsible for quality delivery of programme• They are involved in designing the curriculum and establishment of programme outcomes• They define the course outcomes and ensure their assessment
3.	College Administration	<ul style="list-style-type: none">• It is responsible to provide basic infrastructure , administrative and financial support for successful running of programme
4.	Parents	<ul style="list-style-type: none">• They have aspiration of good higher education and good placement of their wards
5.	Employer	<ul style="list-style-type: none">• They provide industrial training and placement to the students and thus they are main users of the talent of the

		<p>graduates</p> <ul style="list-style-type: none"> • Their feedback helps in improving the contents of programme • Their feedback fills the gap between expectation of industry and Institutional curricula
6.	Alumni	<ul style="list-style-type: none"> • They are the ambassadors of the programme • Their feedback helps in re-designing and improving the curricula and infrastructure in the college • They are helpful in providing guidance and placement to their juniors

Table 1.1 b): Publication and dissemination of vision, mission and PEOs

Publication and dissemination of vision, mission and PEOs			
S.No.	Media type	Publishing Vision Mission	Stakeholders
1.	Electronic Media	College Website	Government Regulatory Bodies Students Faculty/staff Industry/ employers Public Alumni Parents
2.	Display Media	Director office	Students Faculty/Staff Industry/ employers Parents
		Department Notice Boards	Students Faculty/staff
		Activity (conference, FDP, Seminar etc.)	Students Faculty/staff Industry Experts Public
		Selected Classrooms/Labs	Students Faculty/staff
3.	Print Media	College Brochure	Students Faculty/staff Parents
		Departmental meetings, Syllabus revision etc.	Faculty/ staff
		Syllabus Booklets	Students

			Faculty
		Lab manuals	Students Faculty/staff

Stakeholders are made aware of Mission & Vision/PEOs through

- Interaction with employers through Training and Placement Office.
- Interaction of HoDs with members of the Management.
- Awareness through induction Programs for newly joined faculty members.
- Orientation programs for first year students and their parents.
- Through Alumni meets and convocation programs.
- Academic surveys
- Class room teaching
- Academic counseling
- Interaction with parents.
- Regular quizzes

Above mentioned awareness methods are reviewed from time to time.

1.4 State the process for defining the Vision and Mission of the department, and PEOs of the program

(25)

The Department framed the Vision and Mission through a consultative process involving stakeholders in view of Future Scopes and the societal requirements.

Department's Mission & Vision is in line with the Mission & Vision of the college. It is based on the processes & practices followed in the department towards the achievement of College's Vision & Mission.

Steps implemented in defining the vision & mission of the department

Step 1: Vision & Mission of the College is considered as the reference point.

Step 2: Consultation with all the faculty in the department and other departments is the starting point where suggestions & observations are recorded.

Step 3: Inputs from student and parent surveys, subject experts, Alumni are also considered.

Step 4: Inputs from the Training and Placement Office is also considered to get the employer's perspective.

Step 5: Finally, the summarized views and observations are presented to the Director through Dean-Academics & HoD.

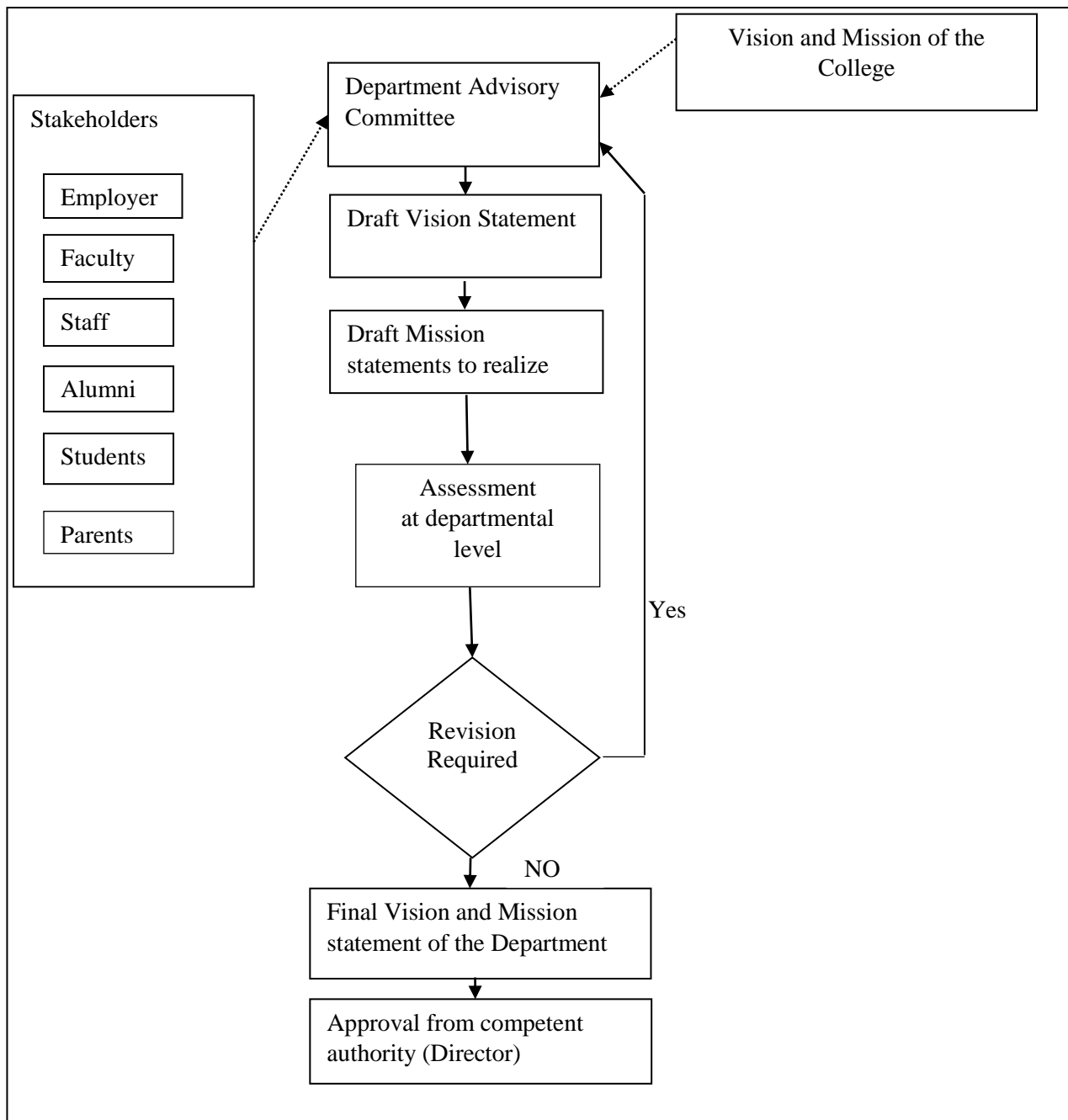


Fig. 1.1: Process of defining Mission & Vision

The PEO are established through a consultation process involving stakeholders including *Students, Alumni, expert from Industry, Faculty, Staff and Recruiters*.

Steps implemented in defining the PEOs of the department

Step 1: PEOs are established in line with Vision and Mission of the Department & College.

Step 2: Director interacts with the Deans & HoDs of the Departments to discuss the important aspects in defining PEOs.

Step 3: At departmental level PEOs are discussed with all faculty & staff members through department meetings & suggestions are incorporated.

Step 4: PEOs are finally approved at the department level.

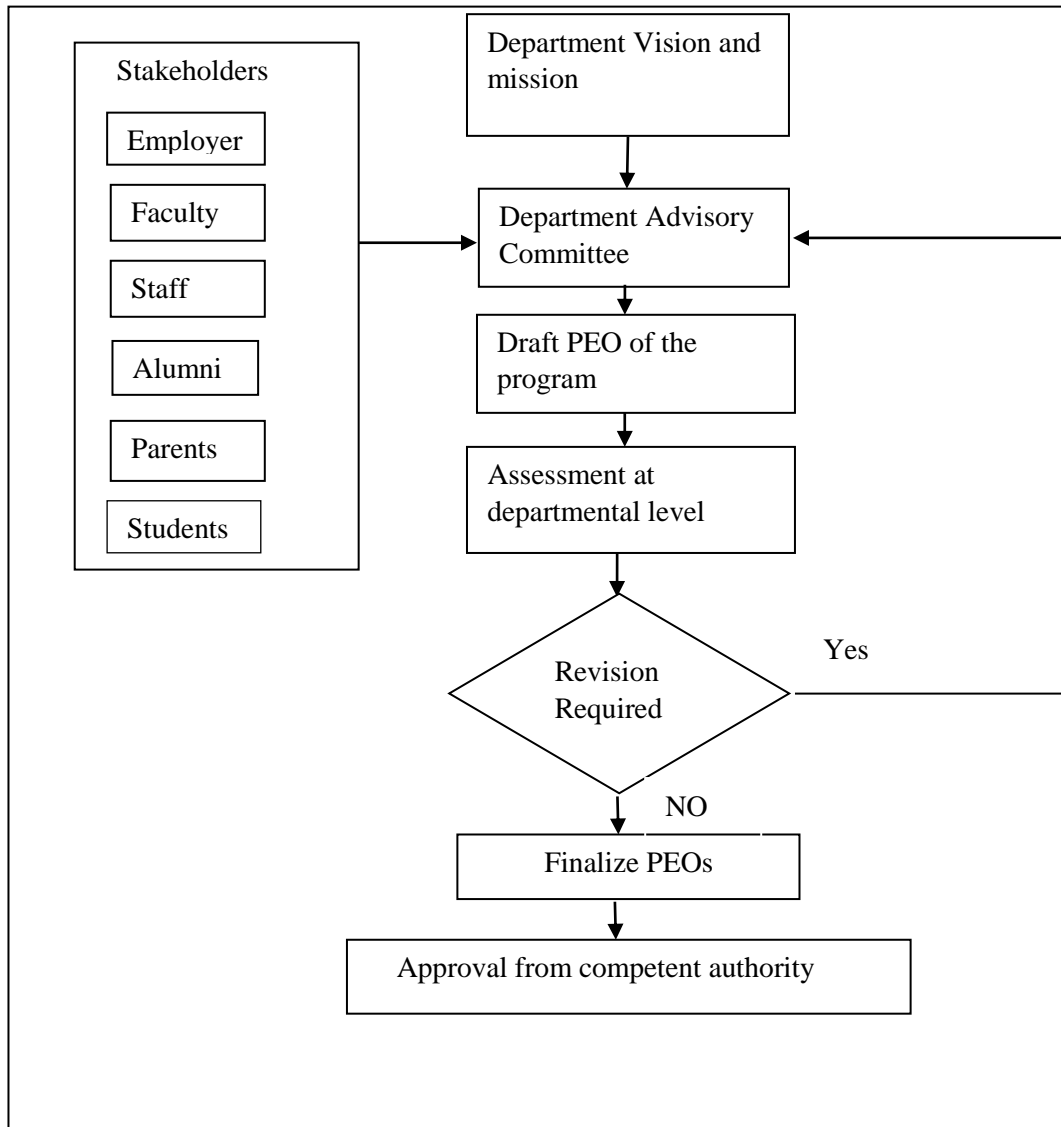


Fig. 1.2: Process of establishing PEOs

1.5. Establish consistency of PEOs with Mission of the department

(15)

Table 1.2: Mapping of PEO with Mission of Department

<i>PEOs</i>	<i>M1</i>	<i>M2</i>	<i>M3</i>	<i>Justification and rationale</i>
PEO1: To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences, Electrical Sciences and Engineering.	3	2	2	<ul style="list-style-type: none"> • Fundamental knowledge in Mathematics, Sciences is the back bone of a quality education & research in Electrical Engineering. • Use of modern teaching learning tools to provide a better consultancy services to societal needs. • Arrangement of extra classes and expert lectures to fulfil the gap between industry and academics.
PEO2: To provide the intensive training for solving real time problems through engineering skills	3	3	2	<ul style="list-style-type: none"> • Expertise in solving real time problems supports education & research in Electrical Engineering. • Use of real world examples, problems & mini projects. • International conferences, workshops, industrial trainings, industry visits, expert talks etc.
PEO3: To engage the students to learn and adopt new technologies to remain ahead in their profession and be leader in our technological vibrant society.	2	3	3	<ul style="list-style-type: none"> • Activities through student technical clubs & student chapters of various technical bodies. • Online certifications.
PEO4: To train the students to communicate effectively and work efficiently in team activities.	1	1	1	<ul style="list-style-type: none"> • Class room presentations. • Organization of engineering activities. • Participation in NSS activities, blood donation camps etc.

Note: M1, M2,..... Mn is distinct elements of Mission statement. Enter correlation levels 1, 2 or 3
 As defined : 1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High).

CRITERION 2	PROGRAM CURRICULUM AND TEACHING – LEARNING PROCESSES	120
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2. PROGRAM CURRICULUM AND TEACHING-LEARNING PROCESSES (120)

2.1. Program Curriculum (20)

As prescribed by Dr. A. P. J. Abdul Kalam University, Lucknow (U. P.) the Course Curriculum of B. Tech. (Electrical Engineering) has been divided into 8 semesters (2019-20). Evaluation Schemes of university for 4-year degree program is mentioned in following tables. The curriculum has been updated by University from time to time. The following tables show the evaluation scheme of all subjects from IIIrd to VIIIth semester for session 2019-20.

Second year courses:

Table: 2.1 (a): III Semester courses

SEMESTER- III													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KOE031-38/ KAS302	Engg. Science Course/Maths IV	3	1	0	30	20	50		100		150	
2.	KAS301/ KVE301	Technical Communication/Universal Human values	2	1	0	30	20	50		100		150	3
			3	0	0								
3.	KEE301	Electromagnetic Field Theory	3	1	0	30	20	50		100		150	4
4.	KEE302	Electrical Measurements & Instrumentation	3	1	0	30	20	50		100		150	4
5.	KEE303	Basic Signals & Systems	3	0	0	30	20	50		100		150	3
6.	KEE351	Analog Electronics Lab	0	0	2				25		25	50	1
7.	KEE352	Electrical Measurements and instrumentation Lab	0	0	2				25		25	50	1
8.	KEE353	Electrical Workshop	0	0	2				25		25	50	1
9.	KEE354	Mini Project or Internship Assessment	0	0	2			50				50	1
10.	KNC301/ KNC302	Computer System Security/Python Programming	2	0	0	15	10	25		50			0
11.		MOOCs (Essential for Hons. Degree)											
		Total										950	22

Table: 2.1 (b): IV Semester courses

SEMESTER- IV													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KAS402/ KOE041-48	Maths IV/Engg. Science Course	3	1	0	30	20	50		100		150	4
2.	KVE401/ KAS401	Universal Human Values/Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3.	KEE401	Digital Electronics	3	0	0	30	20	50		100		150	3
4.	KEE402	Electrical Machines-I	3	1	0	30	20	50		100		150	4
5.	KEE403	Networks Analysis & Synthesis	3	1	0	30	20	50		100		150	4
6.	KEE451	Circuit Simulation Lab	0	0	2				25		25	50	1
7.	KEE452	Electrical Machines - I Lab	0	0	2				25		25	50	1
8.	KEE453	Digital Electronics Lab	0	0	2				25		25	50	1
9.	KNC402/ KNC401	Python Programming/ Computer System Security	2	0	0	15	10	25		50			0
10.		MOOCs (Essential for Hons. Degree)											
		Total										900	21

Third year courses:**Table: 2.1 (c): V Semester courses**

SEMESTER- V													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KEE501	Power System - I	3	1	0	30	20	50		100		150	4
2.	KEE502	Control System	3	1	0	30	20	50		100		150	4
3.	KEE503	Electrical Machines-II	3	1	0	30	20	50		100		150	4
4.	KEE051- KEE054	Departmental Elective-I	3	0	0	30	20	50		100		150	3
5.	KEE055- KEE058	Departmental Elective-II	3	0	0	30	20	50		100		150	3
6.	KEE551	Power System-I Lab	0	0	2				25		25	50	1
7.	KEE552	Control System Lab	0	0	2				25		25	50	1
8.	KEE553	Electrical Machines - II Lab	0	0	2				25		25	50	1
9.	KEE554	Mini Project or Internship Assessment*	0	0	2				50			50	1

10.	KNC501/ KNC502	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
11.		MOOCs (Essential for Hons. Degree)											
Total			17	3	8							950	22

Table: 2.1 (d): VI Semester courses

SEMESTER- VI													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KEE601	Power System-II	3	1	0	30	20	50		100		150	4
2.	KEE602	Microprocessor and Microcontroller	3	1	0	30	20	50		100		150	4
3.	KEE603	Power Electronics	3	1	0	30	20	50		100		150	4
4.	KEE06*	Departmental Elective- III	3	0	0	30	20	50		100		150	3
5.	KOE06*	Open Elective-I	3	0	0	30	20	50		100		150	3
6.	KEE651	Power System-II Lab	0	0	2				25		25	50	1
7.	KEE652	Microprocessor and Microcontroller Lab	0	0	2				25		25	50	1
8.	KEE653	Power Electronics Lab	0	0	2				25		25	50	1
9.	KNC601/ KNC602	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
10.		MOOCs (Essential for Hons. Degree)											
Total			17	3	6							900	21

Fourth year courses:

Table: 2.1 (e): VII Semester courses

SEMESTER-VII									
S. No.	Subject Code	Subject Name	Department	L-T-P	Th./Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		OPEN ELECTIVE COURSE-1	Other Deptt.	3--0--0	70	20	10	100	3
2		DEPTT ELECTIVE COURSE-3	Core Deptt.	3--0--0	70	20	10	100	3
3		DEPTT ELECTIVE COURSE-4	Core Deptt.	3--1--0	70	20	10	100	4
4	REE701	ELECTRICAL DRIVES	Core Deptt.	3--1--0	70	20	10	100	4
5	REE702	POWER SYSTEM PROTECTION	Core Deptt.	3--0--0	70	20	10	100	3

6	REE751	INDUSTRIAL AUTOMATION & PLC LAB	Core Deptt.	0--0--2	50		50	100	1
7	REE752	POWER SYSTEM LAB	Core Deptt.	0--0--2	50		50	100	1
8	REE753	INDUSTRIAL TRAINING	Core Deptt.	0--0--3			100	100	2
9	REE754	PROJECT-1	Core Deptt.	0--0--6			200	200	3
	TOTAL				450	100	450	1000	24

Table: 2.1 (f): VIII Semester courses

SEMESTER-VIII									
S. No.	Subject Code	Subject Name	Department	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		OPEN ELECTIVE COURSE-2	Other Deptt.	3--0--0	70	20	10	100	3
2		DEPTT ELECTIVE COURSE-5	Core Deptt.	3--1--0	70	20	10	100	4
3		DEPTT ELECTIVE COURSE-6	Core Deptt.	3--0--0	70	20	10	100	3
4	REE851	GD & SEMINAR	Core Deptt.	0--0--3			100	100	2
5	REE852	PROJECT-2	Core Deptt.	0--0--12	350		250	600	12
	TOTAL				560	60	380	1000	24

Science Based Open Electives:

- 1 KOE031/041 Engineering Mechanics
- 2 KOE032/042 Material Science
- 3 KOE033/043 Energy Science & Engineering
- 4 KOE034/044 Sensor & Instrumentation
- 5 KOE035/045 Basics Data Structure & Algorithms
- 6 KOE036/046 Introduction to Soft Computing
- 7 KOE036/046 Introduction to Soft Computing
- 8 KOE037/047 Analog Electronics Circuits
- 9 KOE038/048 Electronics Engineering
- 10 RAS501 Managerial Economics
- 11 RAS502/602 Sociology
- 12 RUC501/601 Cyber Security
- 13 RAS601 Industrial Management

14	ROE071	Modelling and Simulation of Dynamic Systems
15	ROE072	Introduction to Smart Grid
16	ROE073	Cloud computing
17	ROE074	Understanding the human being Comprehensively Human Aspiration audits Fulfillment
18	ROE081	Digital and Social Media Marketing
19	ROE082	Entrepreneurship Development
20	ROE083	Machine Learning
21	ROE084	Micro and Smart Systems
22	ROE085	Operations Research
23	ROE086	Renewable Energy Resources
24	ROE087	*Human Values in Madhyasth Darshan
25	ROE088	*Values, Relationship & Ethical Human Conduct-For a Happy & Harmonious Society

Departmental Elective-I:

1. REE051: Power System Optimization
2. REE052: Principles of Communication
3. REE053: Fundamentals of Digital Signal Processing
4. REE054: Internet of Things

Departmental Elective-II:

1. REE061 - Intelligent Sensors & Instrumentation
2. REE062 - Bio-medical Instrumentation
3. REE063 - High Voltage Engineering
4. REE064 - Special Electrical Machines

List of Departmental Elective-III:

1. REE070: Microprocessors and Microcontrollers
2. REE071: Utilization of Electrical Energy & Electric Traction
3. REE072: Introduction to Smart Grid
4. REE073: Power System Optimization

List of Departmental Elective-IV:

1. REE075: Industrial Automation and Control
2. REE076: Energy Efficiency & Conservation
3. REE077: Reliability Engineering
4. REE078: Electric Machine Design

List of Departmental Elective-V:

1. REE080: Advanced Control System
2. REE081: Introduction to Power Quality & FACTS
3. REE082: Power System Dynamics, Control and Monitoring (NPTEL)
4. REE083: Computer Aided Power System Analysis

List of Departmental Elective-VI:

1. REE085: EHVAC & DC Transmission
2. REE086: Power Theft & Energy Management
3. REE087: Digital Image Processing
4. REE088: Antennas (NPTEL)

211. State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any

(10)

The courses & its syllabi are defined by the affiliating university i.e. Dr. A. P. J. Abdul Kalam Technical University, Lucknow. Individual Subject teacher is responsible for the formation of course outcomes of teaching subject. For mapping with POs/PSOs, the correlation levels are defined as 1 (slight / low), 2 (Moderate / Medium) and 3 (Substantial / High). The affiliating university revises the curriculum from time to time as required. Accordingly, the course outcomes and its mapping are reviewed.

The program has well defined POs and PSOs as given below:

Program Outcomes (POs) of Electrical Engineering Department

POs	Engineering Graduates will be able to:
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.
PO2	Problem analysis: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.

Program Specific Outcomes (PSOs) of Electrical Engineering Department

PSO1	An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.
PSO2	An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.
PSO3	An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.

The compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes is measured and evaluated using following components:

- The performance of students in external university exams
- Internal assessment which includes Sessional marks, attendance, teacher's assessment
- Student's success rate during campus recruitments, National level exams like GATE, CAT, certifications.
- Indirect assessment methods including surveys from stake holders, engineering events, student's participation and achievements.
- Feedback from students, faculty, recruiters.

Based on the evaluation & further analysis of above mentioned components, following curricular **gaps** are identified:

Table: 2.2 (a): Classifications of Gaps in different courses

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-352	In Electrical Instrumentation Lab (KEE-352), working of different transducers is explained but their Real time application and Data Acquisition using software approach is missing.	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	KEE-402	The Course Electro-Mechanical Energy Conversion-I (KEE – 402) does not cover DC Motor Braking and Brushless DC Motor which, if included would add strength to the subject.	PO1, PO2, PO4, PO5, PO12, PSO2, PSO3
3.	REE-502	The Course on Elements of Power System (REE-502) touches upon theoretical aspects of various elements of Power System and stress upon mechanical and electrical design of transmission line but Practical aspects of Power System is not discussed much.	PO1, PO2, PO4, PO5, PO11, PO12, PSO1
4.	REE-503	In the course on Control System (REE – 503), the syllabus contains learning of linear systems but emphasis on non-linearity part is missing. Hence basic concepts and stability methods of non-linear system is identified as gap in curriculum.	PO1, PO2, PO4, PO5, PO9, PO12, PSO2, PSO3
5.	REE-601	Course on Power Electronics (REE – 601) covers various power electronic devices and converters like DC-DC, DC-AC, AC-AC & AC-DC. Although converters are taught in details, their specific areas of applications, if taught will give clear insight to the course. Therefore, application of various converters in electric drives and wind energy is taught as topic beyond syllabus.	PO1, PO2, PO3, PO5, PO12, PSO2, PSO3
6.	REE-702	Power System Protection (REE-702) course elaborate the basics of different protection schemes for Transformer, Generator, Transmission line etc. However, introduction to microprocessor based numerical relays; CT, PT and artificial intelligence based numerical schemes are needs to be discussed as per present protection scenario.	PO1, PO2, PO3, PO4, PO5, PO12, PSO1, PSO3
7.	REE-072	In the Course on Introduction to Smart Grid (REE-072) , Energy Scenario in India, General layout of Various Power plants and Economics of Power plant is elaborated but Challenges in maintenance of Solar Power Plant and Operation of Solar Energy is not included.	PO1, PO2, PO3, PO6, PO7, PO9, PO11, PO12, PSO1

Table 2.2 (b): List of identified curricular gaps

S. No.	Identified curricular gaps
1.	Presentation and Communication skills
2.	Additional Programming Skills (MATLAB, Python, Scilab etc.)
3.	Industry specific skills: (PLC, SCADA etc)
4.	Competitive Skills : Aptitude & Reasoning, Group discussions and Mock Interviews, technical subjects like C,OOPS, Data structure
5.	Confidence building & Career Based Counselling
6.	Project Development & report writing (real time/research based projects)

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Table 2.3: Delivery details of the contents beyond the syllabus

Sr. No.	Name & Affiliation of Recourse Person	Title of Expert talk	Date	Remarks (in Conference /Seminar/Workshop/ Expert Lecture Series/Invited talk	Relevance with POs/PSOs
1.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Humanities course for engineering & technology-A case study of AICET model Curriculum	16/01/2020	Invited Talk	PO3, PO6, PO7, PO8, PO9, PO11, PO12
2.	Mr. Suraj pandey & Mr. Mustakeem Ahmad SOFCON Trainer Lucknow	PLC/SCADA	25/02/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
3.	Er. Krishna Mohan pandey & Mr. Chandra Mohan Pandey SOFCON Trainer Lucknow	MATLAB	26/02/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5,
4.	Prof. R.K. Mishra, IIT BHU (Varanasi)	Application of particle swarm optimization	30/03/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
5.	Mr. Om Krishan Singh ,Scientist, MEITY, New Delhi	Research and Innovative Funding opportunities	16/07/2019	Invited Talk	PO2, PO3, PO4, PO6

6.	Dr. Faiz Minai, Integral University, Lucknow	Renewable Energy	29/08/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12
7.	Er. Sube Singh Gurjar RCMA(Korwa), Amethi	Power supply and EMI/EMC Aspect in military Aircraft	03/10/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12
8.	Dr. Pushpendra Singh, REC Banda	Speed Control of Three Phase Induction Motor	15/11/2019	Invited Talk	PSO1, PSO2, PSO3 PO1, PO11
9.	Mr. Abhijeet Singh, REC Banda	Basics of EM Waves	14/11/2019	Invited Talk	PSO1, PSO2, PSO3 PO1, PO11

- Regular feedback & suggestions regarding the curricular gaps are passed on to the Director from departments.
- The suggestions are then shared with the university through Director.
- University has occasionally invited the suggestions on course curriculum from Head of the departments through mails.
- Gaps & inconsistencies in the university question papers are also shared with the university through Director.

2.2. Teaching - Learning Processes (100)

2.2.1 Describe Processes followed to improve quality of Teaching & Learning (25)

Academic calendar for each session is designed by the University at the beginning of each academic session. Rajkiya Engineering College, Ambedkar Nagar further designs its academic calendar in-line to the University calendar for timely completion of academic activities. The Academic calendar displays all the academic activities scheduled for an academic session along with the examination schedule of the University. Dean Academics & HoD reviews the syllabus coverage & other academic activities during the semester from time to time.

Pedagogical Initiatives

- Effective Content delivery method.
- Tutorials & Hands on practice.
- Class Test, presentations, Viva-Voce and Quizzes.

- Weekly assignments (individual/group).
- Remedial Classes, Extra Classes.
- Career based counseling & Value addition Programs.
- Industry-Academia Interaction.
- Encouraging students.
- Project work & weekly assessment.
- In-house software development & incubation Cell
- Engineering Events.
- Ethics & Moral Values.
- Extra library hours, Book bank facility for students.

The department is currently using following reports for academic monitoring & effective teaching learning

1. **Academic counseling & Monitoring:** Daily attendance monitoring report, Timely submission and checking of assignments, student counseling report, course coverage status report, Extra/remedial classes, lab viva-Voce, additional tests, tutorial sheets, weekly project assessment report.
2. **Student Feedback system:** Academic feedback of students is done each semester where the complete details of the current academic performance of a graduate are sent via post to parents.
3. **Academic surveys:** Graduate Exit surveys, Alumni Survey, Feedback from parents, Course End survey, feedback of students by faculty.
4. **Academic audits:** regular audits of course files, lab records, assignments, results, engineering events etc.

Mentorship Detail

Dated:05/08/2020

B.TECH 2ND YEAR (EED)

All the students of B.Tech EE are hereby informed that the following mentor list will be followed for 2020-21 session. Students have to meet their mentor every week on Saturdays.

Sr. No.	Roll. No.	Student Name	Mentor (s)
1.	1907370200002	Abhishek Pratap Singh	Dr. S. P. Singh
2.	1907370200003	Adarsh Ojha	
3.	1907370200004	Adarsh Sen	
4.	1907370200005	Akash Kumar Rao	
5.	1907370200006	Akhilesh Pal	
6.	1907370200007	Alok Kumar	
7.	1907370200008	Alok Raj Dwivedi	
8.	1907370200009	Amit Kumar Gautam	
9.	1907370200010	Anil Kumar Yadav	
10.	1907370200011	Anjali Agrahari	
11.	1907370200012	Anurag Shukla	
12.	1907370200013	Ashish Kannaujia	
13.	1907370200014	Ashutosh Gupta	
14.	1907370200001	Aashutosh Singh	
15.	1907370200015	Ashutosh Yadav	
16.	1907370200016	Chandan Kumar Yadav	
17.	1907370200017	Deepanshu Yadav	
18.	1907370200018	Ekta Singh	
19.	1907370200019	Gauri Shankar	
20.	1907370200020	Goud Akash Ramanuj	
21.	1907370200021	Hemant Kumar	Dr. Aslam Husain
22.	1907370200022	Himanshu Tiwari	
23.	1907370200023	Karan Kumar	
24.	1907370200024	Kashib Khan	
25.	1907370200025	Mamata	
26.	1907370200026	Mansi Gupta	
27.	1907370200027	Mohammad Murshid Alam	
28.	1907370200028	Mubarak Ali	
29.	1907370200029	Muralidhar Maurya	
30.	1907370200030	Neetu Patel	
31.	1907370200031	Nikhil Kumar Singh	

32.	1907370200032	Prabhakar Gautam	Dr. Aslam Husain
33.	1907370200033	Prabhat Kumar	
34.	1907370200034	Pradeep Kumar	
35.	1907370200035	Prajesham Pandey	
36.	1907370200036	Praveen Gautam	
37.	1907370200037	Priya	
38.	1907370200038	Pushkar Kumar	
39.	1907370200039	Rahul Pratap	
40.	1907370200040	Rajneesh Kumar	
41.	1907370200041	Rakhi Kumari	
42.	1907370200042	Raman Sahu	
43.	1907370200043	Rishikesh Mourya	
44.	1907370200044	Ritu Pandey	
45.	1907370200045	Rohit Kumar	
46.	1907370200046	Rumi Devi	
47.	1907370200048	Saket Kumar	
48.	1907370200049	Saksham Raj	
49.	1907370200050	Sakshi Chaurasia	
50.	1907370200051	Sarvesh Kumar Gond	
51.	1907370200052	Satya Prakash Yadav	
52.	1907370200053	Shaad Imam Rizvi	
53.	1907370200054	Shivam	
54.	1907370200055	Shivangi Singh	
55.	1907370200056	Siddharth Verma	
56.	1907370200057	Sunil Kumar Chaudhary	Mr. Ravindra Kumar
57.	1907370200058	Sushmit Dubey	
58.	1907370200059	Swapnil Pathak	
59.	1907370200060	Vandana Maurya	
60.	1907370200061	Vikas Chaudhari	
61.	1907370200062	Vikas Kumar	
62.	1907370200063	Vishal Verma	
63.	1907370130032	Mantasha Khan	
64.	1873720045	Sadhana Gautam (Ex-Student)	

B.TECH 3RD YEAR (EED)

Sr. No.	Reg. No.	Student Name	Mentor (s)
1	18737201	Aadarsha Kumar	Dr. Arif Iqbal
2	18737203	Abhishek Singh	
3	18737204	Aditya Madhav	
4	18737205	Akash Deep	
5	18737206	Akash Rawat	
6	18737207	Anita Yadav	
7	18737208	Anjali	
8	18737209	Anjali Gautam	
9	18737210	Ankesh Kumar	
10	18737211	Ankit Kumar	
11	18737212	Ankit Kumar Gautam	
12	18737213	Ankit Upadhyay	
13	18737214	Ankur Kumar Yadav	
14	18737215	Anurag Singh	
15	18737216	Anurag Singh/32510368(Up See)	
16	18737217	Arshit Kumar	
17	18737218	Ashutosh	
18	18737219	Ashwani Kumar	
19	18737220	Avinsash Kumar	
20	18737221	Awantika	
21	18737222	Ayush Pal	
22	18737223	Deepak Kumar	
23	18737224	Deveshwar Nishad	
24	18737225	Divyanshu Verma	
25	18737226	Dravid Singh	
26	18737227	Girijesh Kumar Gond	
27	18737228	Jayendra Pratap	
28	18737229	Lokesh Kumar	
29	18737230	Manas Kumar	
30	18737231	Mausam Chaudhary	
31	18737232	Mayank Nayak	
32	18737233	Pallavi Tripathi	
33	18737234	Pawan Kumar	
34	18737235	Pragati Jayant	
35	18737236	Pratibha	
36	18737237	Pratik Kumar Gautam	
37	18737238	Prince	
38	18737239	Raj Singh	
39	18737240	Rajensh Kumar	
40	18737241	Raki Kumar Meena	

41	18737242	Ritesh Kumar	Dr. Sanjay Agrawal	
42	18737243	Rohit Gautam		
43	18737244	Sachin Kumar		
44	18737246	Sarvesh		
45	18737247	Saurabh Kumar		
46	18737248	Saurabh Singh		
47	18737249	Sawan Kanaujiya		
48	18737250	Shashank Varshney		
49	18737251	Shashi Prabha		
50	18737252	Shashikant Pal		
51	18737253	Shivendera Kumar Nayak		
52	18737254	Subodh Kumar Singh		
53	18737255	Suraj Kumar		
54	18737256	Suraj Prasad		
55	18737257	Sweta Sagar		
56	18737258	Tanishq Choudhary		
57	18737259	Utkarsh Verma		
58	18737260	Uttkarsh Pratap Singh		
59	18737261	Vimalesh Kumar		
60	18737262	Vinay Kumar Rao		
61	18737263	Vishal Sonker		
62	197379201	Abhishek Kumar Gautam		Mr. Vikas Patel
63	197379202	Chandraketoo Chauhan		
64	197379203	Martand Kumar Yadav		
65	197379204	Priya Anand		
66	197379205	Shubham Kumar		
67	197379206	Shyam Bhawan Gautam		

B.TECH 4TH YEAR (EED)

S. No.	Reg. No.	Name	Mentor (s)
1.	17737201	Abhinav Bajpai	Mr. Vikas Patel
2.	17737202	Aditya Kumar	
3.	17737203	Aditya Raj	
4.	17737204	Akash	
5.	17737205	Akash Kvshwaha	
6.	17737206	Akash Rav	
7.	17737207	Amar Km. Gond	
8.	17737208	Amit Gond	
9.	17737209	Amit Km. Majhi	
10.	17737210	Amit Km. Vishwakarma	
11.	17737211	Anand Kumar Patel	
12.	17737212	Anita Gond	
13.	17737213	Ankit Kumar	

14.	17737214	Ankur Bauda
15.	17737215	Anurag Kumar
16.	17737216	Arjun Kumar
17.	17737217	Arpita Chaudhary
18.	17737218	Ashish Km. Pandey
19.	17737219	Awanish Km. Yadav
20.	17737220	Bipin Yadav
21.	17737221	Chandra Parkash Anand
22.	17737223	Devanshu Singh
23.	17737224	Gaurav Vishesh
24.	17737225	Harshita Chaudhary
25.	17737226	Kavita
26.	17737227	Madhusudan
27.	17737228	Mithlesh Kumar
28.	17737229	Mohammad Faisal Khan
29.	17737230	Mohit Kumar
30.	17737231	Pankaj Km. Mahaur
31.	17737232	Prakhar Singh
32.	17737233	Priyanshi Bharti
33.	17737234	Raj Vaibhav
34.	17737235	Rajarshi Km. Gaurav
35.	17737236	Rajarshi Singh
36.	17737237	Rajverdhan Verma
37.	17737238	Reshi Pal
38.	17737239	Rohit Singh
39.	17737240	Samant Srivastava
40.	17737241	Saurabh Kumar
41.	17737242	Shailendra Singh
42.	17737243	Shalini Keshri
43.	17737244	Shreya Chaudhary
44.	17737245	Shubham Singh Chauhan
45.	17737246	Simpi Gupta
46.	17737248	Suneeta Ranjan
47.	17737249	Surya Prakash Dinkar
48.	17737250	Swatantra Km. Azaad
49.	17737251	Tarun Goel
50.	17737252	Utkarsh Pratap
51.	17737253	Vartika Dubey
52.	17737254	Vidhu Manwal
53.	17737255	Vikas Chaudhary
54.	17737256	Vikas Kumar
55.	17737257	Vinod Km. Verma
56.	17737258	Vishal
57.	17737259	Vishwambar Singh

Dr. Puneet Joshi

Mr. Lokesh Kumar Yadav

58.	17737260	Vikas Tiwari	Mr. Sonu Kumar
59.	17737261	Vivek Kumar	
60.	17737262	Yogesh Kumar	
61.	17737263	Shivam Patel	
62.	187379201	Aansu Kumari	
63.	187379202	Chandan Kumar	
64.	187379203	Harishankar Sah	
65.	187379204	Kamlesh Kumar Gupta	
66.	187379205	Km. Sweta Bhardwaj	
67.	187379206	Manisha Bharti	
68.	187379207	Parikshit Saroj	
69.	187379208	Rahul Kumar	
70.	187379209	Rahul Kumar	
71.	187379210	Renu Singh	
72.	187379211	Shubham Kumar Dwivedi	
73.	187379212	Sudheer Kumar Maury	

Ref. No. 621/EED/REC/19

Dated: 05/08/2019

All the students of B.Tech EE are hereby informed that the following mentor list will be followed for 2018-19 session. Students have to meet their mentor every week on Saturdays.

B.TECH 2ND YEAR (EED)

Sr. No.	Reg. No.	Student Name	Mentor (s)
1.	18737201	Aadarsha Kumar	Dr. Arif Iqbal
2.	18737203	Abhishek Singh	
3.	18737204	Aditya Madhav	
4.	18737205	Akash Deep	
5.	18737206	Akash Rawat	
6.	18737207	Anita Yadav	
7.	18737208	Anjali	
8.	18737209	Anjali Gautam	
9.	18737210	Ankesh Kumar	
10.	18737211	Ankit Kumar	
11.	18737212	Ankit Kumar Gautam	
12.	18737213	Ankit Upadhyay	
13.	18737214	Ankur Kumar Yadav	
14.	18737215	Anurag Singh	
15.	18737216	Anurag Singh/32510368(Up See)	
16.	18737217	Arshit Kumar	
17.	18737218	Ashutosh	
18.	18737219	Ashwani Kumar	
19.	18737220	Avinsash Kumar	
20.	18737221	Awantika	

21.	18737222	Ayush Pal	Dr. Yudhishithir Pandey	
22.	18737223	Deepak Kumar		
23.	18737224	Deveshwar Nishad		
24.	18737225	Divyanshu Verma		
25.	18737226	Dravid Singh		
26.	18737227	Girijesh Kumar Gond		
27.	18737228	Jayendra Pratap		
28.	18737229	Lokesh Kumar		
29.	18737230	Manas Kumar		
30.	18737231	Mausam Chaudhary		
31.	18737232	Mayank Nayak		
32.	18737233	Pallavi Tripathi		
33.	18737234	Pawan Kumar		
34.	18737235	Pragati Jayant		
35.	18737236	Pratibha		
36.	18737237	Pratik Kumar Gautam		
37.	18737238	Prince		
38.	18737239	Raj Singh		
39.	18737240	Rajensh Kumar		
40.	18737241	Raki Kumar Meena		
41.	18737242	Ritesh Kumar		Dr. Sanjay Agrawal
42.	18737243	Rohit Gautam		
43.	18737244	Sachin Kumar		
44.	18737246	Sarvesh		
45.	18737247	Saurabh Kumar		
46.	18737248	Saurabh Singh		
47.	18737249	Sawan Kanaujia		
48.	18737250	Shashank Varshney		
49.	18737251	Shashi Prabha		
50.	18737252	Shashikant Pal		
51.	18737253	Shivendera Kumar Nayak		
52.	18737254	Subodh Kumar Singh		
53.	18737255	Suraj Kumar		
54.	18737256	Suraj Prasad		
55.	18737257	Sweta Sagar		
56.	18737258	Tanishq Choudhary		
57.	18737259	Utkarsh Verma		
58.	18737260	Uttkarsh Pratap Singh		
59.	18737261	Vimalesh Kumar		
60.	18737262	Vinay Kumar Rao		
61.	18737263	Vishal Sonker	Mr. Vikas Patel	
62.	197379201	Abhishek Kumar Gautam		
63.	197379202	Chandraketo Chauhan		
64.	197379203	Martand Kumar Yadav		
65.	197379204	Priya Anand		
66.	197379205	Shubham Kumar		
67.	197379206	Shyam Bhawan Gautam		

B.TECH 3rd YEAR (EED)

S. No.	Reg. No.	Name	Mentor (s)
1.	17737201	Abhinav Bajpai	Mr. Vikas Patel
2.	17737202	Aditya Kumar	
3.	17737203	Aditya Raj	
4.	17737204	Akash	
5.	17737205	Akash Kvshwaha	
6.	17737206	Akash Rav	
7.	17737207	Amar Km. Gond	
8.	17737208	Amit Gond	
9.	17737209	Amit Km. Majhi	
10.	17737210	Amit Km. Vishwakarma	
11.	17737211	Anand Kumar Patel	
12.	17737212	Anita Gond	
13.	17737213	Ankit Kumar	
14.	17737214	Ankur Bauda	
15.	17737215	Anurag Kumar	
16.	17737216	Arjun Kumar	
17.	17737217	Arpita Chaudhary	
18.	17737218	Ashish Km. Pandey	
19.	17737219	Awanish Km. Yadav	
20.	17737220	Bipin Yadav	
21.	17737221	Chandra Parkash Anand	
22.	17737223	Devanshu Singh	
23.	17737224	Gaurav Vishesh	
24.	17737225	Harshita Chaudhary	
25.	17737226	Kavita	Dr. Puneet Joshi
26.	17737227	Madhusudan	
27.	17737228	Mithlesh Kumar	
28.	17737229	Mohammad Faisal Khan	
29.	17737230	Mohit Kumar	
30.	17737231	Pankaj Km. Mahaur	
31.	17737232	Prakhar Singh	
32.	17737233	Priyanshi Bharti	Mr. Lokesh Kumar Yadav
33.	17737234	Raj Vaibhav	
34.	17737235	Rajarshi Km. Gaurav	
35.	17737236	Rajarshi Singh	
36.	17737237	Rajverdhan Verma	
37.	17737238	Reshi Pal	
38.	17737239	Rohit Singh	
39.	17737240	Samant Srivastava	
40.	17737241	Saurabh Kumar	

41.	17737242	Shailendra Singh
42.	17737243	Shalini Keshri
43.	17737244	Shreya Chaudhary
44.	17737245	Shubham Singh Chauhan
45.	17737246	Simpi Gupta
46.	17737248	Suneeta Ranjan
47.	17737249	Surya Prakash Dinkar
48.	17737250	Swatantra Km. Azaad
49.	17737251	Tarun Goel
50.	17737252	Utkarsh Pratap
51.	17737253	Vartika Dubey
52.	17737254	Vidhu Manwal
53.	17737255	Vikas Chaudhary
54.	17737256	Vikas Kumar
55.	17737257	Vinod Km. Verma
56.	17737258	Vishal
57.	17737259	Vishwambar Singh
58.	17737260	Vikas Tiwari
59.	17737261	Vivek Kumar
60.	17737262	Yogesh Kumar
61.	17737263	Shivam Patel
62.	187379201	Aansu Kumari
63.	187379202	Chandan Kumar
64.	187379203	Harishankar Sah
65.	187379204	Kamlesh Kumar Gupta
66.	187379205	Km. Sweta Bhardwaj
67.	187379206	Manisha Bharti
68.	187379207	Parikshit Saroj
69.	187379208	Rahul Kumar
70.	187379209	Rahul Kumar
71.	187379210	Renu Singh
72.	187379211	Shubham Kumar Dwivedi
73.	187379212	Sudheer Kumar Maury

Mr. Sonu Kumar

B.TECH 4th YEAR (EED)

Sr. No.	Roll. No.	Student Name	Mentor (s)
1.	1673720001	Aakash Gangwar	Dr. S. P. Singh
2.	1673720002	Abhijeet Singh	
3.	1673720003	Abhinav Kandu	
4.	1673720004	Abhishek Kumar	
5.	1673720005	Abhishek Kumar	
6.	1673720006	Abhishek Kumar Priyada	
7.	1673720007	Abhishek Kumar Singh	

8.	1673720008	Abhishek Pandey		
9.	1673720009	Adarsh Kumar		
10.	1673720010	Adity Ratan		
11.	1673720011	Alok Kumar		
12.	1673720012	Alok Paswan		
13.	1673720013	Aman Singh		
14.	1673720014	Amandeep Singh		
15.	1673720015	Aryan Singh		
16.	1673720016	Asheesh Rajbhar		
17.	1673720017	Ashish Kumar Saroj		
18.	1673720018	Ashish Narayan		
19.	1673720019	Ashwin Kumar Yadav		
20.	1673720020	Deepak Kumar Kannaujiy		
21.	1673720021	Dinesh Kumar		Dr. Aslam Husain
22.	1673720022	Himanshu Sagar		
23.	1673720023	Kapil Kumar		
24.	1673720024	Km Renu		
25.	1673720025	Krishan Pal Singh		
26.	1673720026	Kumari Anjali Singh		
27.	1673720027	Kumari Savita		
28.	1673720028	Lalit Gond		
29.	1673720029	Maneesh Kumar Gupta		
30.	1673720030	Manish Kumar Bharati		
31.	1673720031	Manoj Kumar		
32.	1673720033	Mukul Dev		
33.	1673720034	Neeraj Kumar		
34.	1673720035	Pankaj Gangwar		
35.	1673720036	Pawan Kumar Bharati		
36.	1673720037	Prashant Kumar Bandhu		
37.	1673720038	Priti Maurya		
38.	1673720039	Pushpendra Singh		
39.	1673720040	Ravi Shankar Gautam		
40.	1673720041	Ritik Rajput		
41.	1673720043	Robin Singh	Mr. Abdul Hafeez	
42.	1673720044	Sanoj Kumar		
43.	1673720045	Sarthak Gupta		
44.	1673720046	Satish Kumar		
45.	1673720047	Saurabh Kumar		
46.	1673720048	Shalini Patel		
47.	1673720049	Shivam Gautam		
48.	1673720050	Shivangi Verma		

49.	1673720051	Shivraj Vishwakarma	
50.	1673720052	Simran Yadav	
51.	1673720053	Somya	
52.	1673720054	Sunil Yadav	
53.	1673720055	Sweta Kumari	
54.	1673720056	Vijay Kumar	
55.	1673720058	Vinit Kumar	
56.	1573720035	Preeti Gautam	Mr. Ravindra Kumar
57.	1773720901	Ankit Kumar Maurya	
58.	1773720902	Deeksha Singh	
59.	1773720903	Deepak Kumar	
60.	1773720904	Dheeraj Dharendra Singh Yadav	
61.	1773720905	Govind	
62.	1773720906	Harendra Pratap Aditya	
63.	1773720907	Ishwar Chand	
64.	1773720908	Km. Kajal Prasad	
65.	1773720909	Km. Pushpalata	
66.	1773720910	Mithlesh Kumar	
67.	1773720911	Vivek Bharti	
68.	1773720912	Yashwant Kumar	
69.	1673700004	Akash Deep Arya	

2.2.2. Quality of internal semester Question papers, Assignments and Evaluation (20)

Question papers for University Semester Exams are prepared by the university itself. We are required to prepare question papers, assignments for all other internal assessments including Sessional exams (two exams in a semester), internal viva-voce for laboratories etc.

A. Initiatives:

Following initiatives have been devised at department level to prepare quality assignments for all internal assessments

- A draft committee is formed at the start of each semester to take care of the quality of assignments & question papers. This committee includes, class coordinators & HoD.
- Discussions on few sample assignments/ question papers/Lab Assignments types are done to help the faculty members to understand what kind of assignments should be given.

- Assignments/ Lab Assignments are prepared & evaluated at the beginning of the semester itself.
- Weekly assignments/ Lab Assignments are provided against each subject.
- Assignments/ Lab Assignments provided are from the contents taught during that week.
- The assignments/ question papers/Lab Assignments are prepared by the individual subject teachers in consultation with coordinators
- Faculty members are also encouraged to include case studies and standard questions that are important from examination viewpoint.
- Students are encouraged to use standard contents /references on internet & follow standard books while writing their assignments.
- Subject assignments also include few questions on ‘contents beyond the syllabus’.

B. Implementation Details

Student assignments:

- Students must do the assignments on a separate copy/file for each subject.
- Assignments are checked /graded by the faculty on a regular basis.
- The solutions to given assignments are discussed in tutorial classes/other problem solving classes.
- Solutions of best student assignments are also discussed in classes.

Question papers (Sectional/Class tests):

- Individual question papers are prepared by each faculty.
- References from standard books, old university question papers and case studies.
- The standard & quality of questions is strictly maintained.
- Questions papers are prepared strictly as per the format of the university.
- Quality of question papers is checked by HoD.
- The solutions, common mistakes & the best answer sheets are discussed in the classes.

Laboratory Assignments:

- A list of experiments is prepared at the beginning of the semester.
- The reference for preparing the list is obviously the university syllabus.
- We also include few assignments as additional experiments beyond the syllabus.
- Concepts learnt during theory classes are practically implemented during Lab hours.

C. Evaluation & Analysis

Student assignments

- Sample copies of checked assignments are analyzed by the committee/HoD.
- Student class coordinators provide useful inputs to Class coordinators/HoD on the entire process of assignment.
- Assignments are also evaluated by HoD & Director during the evaluation of course files on regular basis.
- The checked assignment accounts for 10 marks allocation to students which are one of the components of his internal assessment for each subject as per the affiliating university norms.
- Students not submitting their assignments are further counseled and if required his/her feedback may be shared to his/her parents. Doing assignments is a compulsory academic activity.

Question papers (Sessional/Class tests):

- A comparative evaluation of student's performance is carried out after each test.
- We try to follow a common scheme while evaluation of papers.
- Students are required to check their answer sheets after evaluations.

Laboratory Assignments

- Each lab experiment is well documented as per a common format including heads like Objectives, Introduction, Algorithms/model, implementation, applications, analysis, conclusion
- Faculty is encouraged to include implementation of one mini project in the labs.
- Monthly evaluation method including Viva-Voce is employed to evaluate the performance of students in labs.

2.2.3. Quality of Student Projects

(25)

Project identification & allotment

1. Technical project proposals are first invited from the faculty members.
2. Proposals are discussed along with project committee involving project coordinators to discuss its relevance from implementation & availability of resources view point.
3. Good projects are also invited from the self motivated student members.

4. Each class is assigned a dedicated project coordinator to monitor the progress of all the projects of that class.
5. Once the projects are finalized, students groups are formed with similar interests. Maximum of 3-4 students are allowed in a group.
6. Finally the projects are assigned to various student groups.
7. Students then consult with their assigned project guides to understand the overall idea.
8. Project allocation for final year is generally done in the VI semester of their course itself.
9. Students are now asked to submit & present a project synopsis after 10-15 days.

Continuous Monitoring & evaluation

1. Student members are required to meet their faculty supervisors on weekly basis.
2. This weekly assessment report duly signed by the faculty supervisors, needs to be submitted to the project coordinator.
3. At least 3-4 presentations are scheduled during the semester.
4. Students are also encouraged to take useful inputs/help from their seniors/industry personals that they know.
5. The cumulative performance of students in these presentations is properly documented and forms the basis for award of final marks.
6. Few students have also published their work.
7. It is ensured that student completes all the phases of the project development by his own to so as to learn to apply the concepts and gain enough confidence for real projects.

Awards & recognition

- Best projects are recognized by giving best project certificates
- Students who have developed good projects on their self are also recognized & awarded on public platforms.

Quality of student projects is analyzed on the following parameters. Award of marks is based on quality of work done.

- Ability of the students to demonstrate the overall idea & objectives.
- Ability of the students to demonstrate innovation, unique features and use of project in real world.
- Student's ability to write & present the work effectively during the project presentations.
- The ability to use design methodologies to prepare a model/design of the overall project.
- Ability to apply the concepts of software engineering & project management concepts for

designing, implementation, documentation etc.

- Ability to present the results & outcomes in appropriate manner.
- Ability to document the project as per the given instructions. His ability to write & represent the contents.

List of potential projects developed by Final Year Students (2019-20, 2018-19, 2017-18 sessions).

Projects are evaluated and rated on the basis of following parameters

- % of Completion,
- Innovation/Uniqueness, Research Significance
- Application to real world
- Methodology & use of Advance Computational Techniques

Table 2.4 (a): Selected Projects in session 2019-20.

Group No.	NAME	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	RATING (Out of 5)
1.	Abhishek Pandey Lalit Gond Ashwin Kumar Yadav	Dr. S.P.Singh & Mr.Ravindra Kumar	Smart Garden with IoT Plant Monitoring System	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
2.	Adity Ratan Neeraj Kumar Aryan Singh	Mr. Lokesh K Yadav	Comparative Performance Analysis of DC motor with FUZZY PID & PSO- PID	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
3.	Abhishek Kumar Aman Singh Sarhak Gupta	Dr. Yudhishtir Pandey	Power Quality Improvements In Power system interfaced with renewable energy Sources	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
4.	Km Renu Maneesh Kumar Gupta Ritik Rajput	Dr.Sanjay Agrawal	Designing of Laboratory Based Demand Side management In the Smart Grid Prospective	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
5.	Ashish Kumar Saroj Shivraj Vishwakarma Akash Deep Arya	Dr. Mohammed Aslam Husain	Maximum Power point Tracking (MPPT) for solar PV system	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	3

Table 2.4 (b): Selected Projects in session 2018-19.

Group No.	NAME	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	RATING (Out of 5)
1.	Kavita Singh Dheeraj Mishra Shivam Maurya	Dr. Yudhishthir Pandey & Ravindra Kumar	Voltage Control of Power System Using FACTS devices	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
2.	Mr. Anand K Gupta Mr. Utkarsh Kanth Mr. Abhishek	Dr. A K Mishra & Dr. Mohammed Aslam Husain	Efficient Monitoring of Fuel Cell with Methanol as reformer	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
3.	Janmejai Tiwari Pankaj Kumar Saroj Pawan Kumar	Dr. S. P. Singh & Ms. Shashi Pandey	Solar power charge controller	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
4.	Mr. Khushuram Mr. Sandeep Kumar Mr. Shivam Rajput	Mr. Lokesh Kumar Yadav	CLOSED LOOP CONTROL OF BRUSH-LESS D.C. MOTOR	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
5.	Shatrughan Km.Antima Pandey Shamsul laqa	Dr. Mohammed Aslam Husain	Economic feasibility analysis of Solar PV generation for academic building of REC Ambedkarnagar	1,2,3,4,5,6 , 8,9,10,11, 12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4

Table 2.4 (c): Selected Projects in session 2017-18

Group No.	NAME	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	RATING (Out of 5)
1.	Kamini Singh Kumari Priyanka Shivangee	Ms. Shikha Choudhary	Underground Cable Fault Distance Locator Using Microcontroller	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	3
2.	Amit Kumar Anshul Bhardwaj Mayank Dhakrey	Mr. Sonu Kumar	Energy Efficient Wind Power Generation	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
3.	Ajeeta Srivastava Akansha	Ms. Shashi Pandey	Dynamic Performance Improvement Of Wind Farm With Dfig Using Statcom	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3

4.	Manish Kumar Rohit Jaiswal Setu Parmar Shubham Rao	Dr. S. P. Singh	Automatic Three Phase Supply Changeover	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
5.	Sanjay Kumar Yadav Sumit Kumar Vinit Kumar	Mr. Sonu Kumar	An Environmental Scheme Of Wireless Level Controller	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4

Note: Projects above are rated using the following scheme:

Rating	Remarks
5	Excellent
4	Very Good
3	Good
2	Average
1	Poor

Few students also develop additional projects pertaining to college requirements, collaborative project from some industry as a part of the in-house development cell in guidance of faculty members.

2.2.4. Initiatives related to Industry Interaction

(15)

A strong Academia-Industry Interaction is the major focus of the department as well as the College. Higher education is not only synonym with the world class facilities, faculty and students but also with the involvement of industry in academia. Whatever we do and facilitate our students with, it remains incomplete without the involvement of the industry where this knowledge is actually gets implemented.

The College has created an **Industrial Relations cell** which work towards opening the various avenues where we can collaborate with the industry. They include:

- To create an 'Industry Lecture Series' by setting up a pool of distinguished guest lectures from industry experts.
- To set up relevant Centre of Excellence (CoE) in REC Ambedkar Nagar with industry /corporate players.
- Organize 'Short-term Training' opportunities (4-8 weeks) for students.
- Attract 'Industry Projects' to the College for execution by students/departments

- To arrange for Industry sponsored conferences.
- Make latest tools/technologies available from leading companies to provide practical exposure for faculty.
- Help setup Faculty Development Programs, Workshop & Seminar delivered by Industry Personnel. They could range from one day to 15 days.
- Enable faculty to modify the curriculum that suits evolving industry needs and promote industry participation in curriculum planning & development.
- Facilitate research and development projects.

The Department quality assurance with industry interaction is ensured by multipronged approach which is outlined below:

- Regular meetings with prominent industry experts as its members ensure industry focused & application oriented curricula, besides their periodic review.
- Regular lectures of industrial experts as per the needs of the students.
- In seventh semester project training is mandatory for all the students.
- Inputs offered by Industry experts are adequately accommodated in the value added programs run by the department.
- Industrial experts are also invited as expert lectures.

Details of Expert Lectures

Table 2.5 (a): Organized Expert Lectures

Sr. No.	Name & Affiliation of Resource Person	Title of Expert talk	Date	Remarks (in Conference /Seminar/Workshop/ Expert Lecture Series/Invited talk	Relevance with POs/PSOs
1.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Humanities course for engineering & technology-A case study of AICET model Curriculum	16/01/2020	Invited Talk	PO3, PO6, PO7, PO8, PO9, PO11, PO12
2.	Mr. Suraj Pandey & Mr. Mustakeem Ahmad SOFCOIN Trainer, Lucknow	PLC/SCADA	25/02/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
3.	Er. Krishna Mohan Pandey & Mr. Chandra Mohan Pandey SOFCOIN Trainer,	MATLAB	26/02/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3,

	Lucknow				PO4, PO5,
4.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Application of particle swarm optimization	30/03/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
5.	Mr. Om Krishan Singh, Scientist, MEITY, New Delhi	Research and Innovative Funding opportunities	16/07/2019	Invited Talk	PO2, PO3, PO4, PO6
6.	Dr. Faiz Minai, Integral University, Lucknow	Renewable Energy	29/08/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12
7.	Er. Sube Singh Gurjar RCMA(Korwa), Amethi	Power supply and EMI/EMC Aspect in military Aircraft	03/10/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12
8.	Dr. Pushpendra Singh, REC Banda	Speed Control of Three Phase Induction Motor	15/11/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO11
9.	Mr. Abhijeet Singh, REC Banda	Basics of EM Waves	14/11/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO11
10.	Er. Sube Singh Gurjar, RCMA (HAL, Korwa), Amethi	Evolution of flight data Recorder & Certification for military application	08/05/2018	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO4, PO5, PO9
11.	Prof. S K Chaturvedi, IIT Kharagpur	Reliability Engineering and its Applications	21/04/2018	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO4, PO5, PO9, PO11

Workshop/Training/Short term course Details

Table 2.5 (b): Organized Workshop/Training/FDP/STC

Sr. No.	Name of program	Organizer	Duration with Date
1.	International Seminar on "Recent Advances in Science and technology(ISRAST-2020)	REC Ambedkar Nagar through TEQIP-III	2 days (February 16-17 ,2020)
2.	International Conference (REC-CON-19)	REC Ambedkar Nagar through TEQIP-III	2 days (November 28-29 ,2019)
3.	One week workshop on	REC Ambedkar Nagar	One week (September 02-06,

	“Environmental Management for Eco-Friendly Infrastructure Development”	through TEQIP-III	2019)
4.	One week workshop on “Robotics Workshop cum Championship (ROBOFIESTA)	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One Week short term Course On “Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell”	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
6.	“Developing Critical thinking using Learning Management System (LMS) and ICT tools”	REC Ambedkar Nagar through TEQIP-III	One week (August05-09, 2019)
7.	Four Week Summer Internship on “MATLAB and its Application in Electrical Engineering	REC Ambedkar Nagar through TEQIP-III	Four week (17 June-15 July 2019)
8.	Four Week Summer Internship on “Open Source software-SCILAB,e-SIM”	Self-Sponsored	Four week (10 June-10 July 2019)
9.	Faculty Development Program On “Essentials of Teaching-Learning process and research Methology”	REC Ambedkar Nagar through TEQIP	One week (February 04-08, 2019)
10.	National Workshop on “Nurturing Start-up/Entrepreneurial Skills in Budding Engineers”	REC Ambedkar Nagar through TEQIP	One week (February 15-19, 2019)
11.	One Week short term Course On “Real time Simulation of FACTS and HVDC through ICT”	In collaboration with NITTTR Chandigarh	One week (January 20-February02, 2019)
12.	One week National workshop on “MATLAB & its application in Engineering”	Entruple Technologies pvt Ltd	One week (January 20-February02, 2019)
13.	Week short term Course On “Artificial Intelligence & optimization through ICT”	In collaboration with NITTTR Chandigarh	One week (January 21-25, 2019)
14.	One Week short term Course On “Recent Advances in Electrical engineering”	REC Ambedkar Nagar through TEQIP	One week (April 10-14, 2018)
15.	Ansys Maxwell		1 day (February 02, 2018)
16.	Workshop on “Outcome Based Education (OBE)”	REC Ambedkar Nagar through TEQIP	2 days (September 09-10, 2018)
17.	ICT course on “Scilab Programming”	In collaboration with NITTTR Chandigarh	One week (May 14-18, 2018)
18.	Short Term training program On Laboratory and Workshop Management “	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

2.2.5 Initiatives related to industry internship/summer training

(15)

Initiatives and implementation:

- Students are counseled by Sr. faculty members on the need & suggestion on summer training programs. As per university syllabus, there is a course namely Industrial Training & Viva-Voce in VII semester.
- Students are encouraged to provide the list of programs or type of industry they wish to opt for.
- Based on the inputs by students, few industries are identified by the department & Career Development Cell of the institute. A proper communication is carried out with the concerned industry. A request letter is sent to the industry. Students are allowed to work as interns in the industry for a maximum duration of 2 months (as per the university norms).
- Many students prefer to do some industry specific training from organizations nearby their home. Such students are advised on the kind of training programs they should prefer.
- All the students are required to complete one project that should be the application of the contents covered during his/her training.
- Few students wish to do industrial training within the campus. For such students, special summer training programs in collaborations with some industry is organized.
- In campus training programs is completely designed & monitored at department level. Students are given real time projects as a part of the training. Each such student is required to present their implemented projects after summers.
- Students are also provided with project development certificates.
- All the students are required to present their projects reports in spiral with certificate from the concerned industry. This is also a requirement as per the syllabus.

Students are allocated marks on the following parameters.

- Usefulness or utility of the project
- His individual design & implementation efforts
- His ability to apply the learnt concepts
- His efforts in presentation & documentation

Impact analysis

- Students gain the basic needed skills for the development of real world projects.

- These training programs have also helped them in development of good projects in their final year.
- Most of the students undergone training has got placed through campus recruitments.
- This helps the Student to understand & apply the various development phases in projects. This motivates them to develop better projects.

Details of In-house Summer Industrial Training

Table 2.6 (a): Industry Interactions/training for minimum 1 month duration in session 2019-20

S. No.	Reg. No.	Students	Training Place
1.	1873720901	Aansu Kumari	ONGC
2.	1773720001	Abhinav Bajpai	Internshala (Online)
3.	1773720002	Aditya Kumar	Internshala (Online)
4.	1773720003	Aditya Raj	Internshala (Online)
5.	1773720004	Akash	Internshala (Online)
6.	1773720005	Akash Kushwaha	Internshala (Online)
7.	1773720007	Amar Kumar Gond	Internshala (Online)
8.	1773720008	Amit Gond	Internshala (Online)
9.	1773720009	Amit Kumar Majhi	Internshala (Online)
10.	1773720010	Amit Kumar Vishwakarma	Internshala (Online)
11.	1773720011	Anand Kumar Patel	Internshala (Online)
12.	1773720013	Ankit Kumar	Internshala (Online)
13.	1773720014	Ankur Baudh	Internshala (Online)
14.	1773720015	Anurag Kumar	Internshala (Online)
15.	1773713016	Archana Yadav	Internshala (Online)
16.	1773720017	Arpita Chaudhary	Internshala (Online)
17.	1773720018	Ashish Kumar Pandey	Internshala (Online)
18.	1773720019	Awanish Kumar Yadav	DUCAT, INTERNSHALA
19.	1773720020	Bipin Yadav	Internshala (Online)
20.	1873720902	Chandan Kumar	Internshala (Online)
21.	1773720021	Chandra Prakash Anand	DUCAT
22.	1773720021	Chandra Prakash Anand	DUCAT
23.	1773720022	Devanshu Singh	Internshala (Online)
24.	1773720023	Gaurav Vishesh	Internshala (Online)
25.	1873720903	Hari Shankar Sah	Internshala (Online)
26.	1773720024	Harshita Chaudhary	Internshala (Online)
27.	1873720904	Kamlesh Kumar Gupta	Internshala (Online)
28.	1773720025	Kavita	Internshala (Online)
29.	1873720905	Km. Sweta Bhardwaj	Internshala (Online)
30.	1773720026	Madhusudan	Internshala (Online)
31.	1873720906	Manisha Bharti	Internshala (Online)
32.	1773720027	Mithlesh Kumar	Internshala (Online)

33.	1773720028	Mohammad Faisal Khan	Internshala (Online)
34.	1773720029	Mohit Kumar	Internshala (Online)
35.	1773720030	Pankaj Kumar Mahaur	ICT Aacdmey, IIT Kanpur
36.	1873720907	Parikshit Saroj	Internshala (Online)
37.	1773720031	Prakhar Singh	Internshala (Online)
38.	1873720908	Rahul Kumar	Internshala (Online)
39.	1873720909	Rahul Kumar	Internshala (Online)
40.	1873720909	Rahul Kummar	Internshala (Online)
41.	1773720033	Raj Vaibhav	Internshala (Online)
42.	1773720034	Rajarshi Kumar Gaurav	Internshala (Online)
43.	1773720035	Rajarshi Singh	Internshala (Online)
44.	1773720036	Rajverdhan Verma	Internshala (Online)
45.	1873720910	Renu Singh	Internshala (Online)
46.	1773720037	Rishi Pal	Internshala (Online)
47.	1673720042	Robin Kumar	Internshala (Online)
48.	1773720038	Rohit Singh	Internshala (Online)
49.	1773720039	Samant Srivastava	Internshala (Online)
50.	1773720040	Saurabh Kumar	Internshala (Online)
51.	1773720041	Shailendra Singh	Internshala (Online)
52.	1773720042	Shalini Keshri	NIELIT, Lucknow, Internshala (Online)
53.	1773720043	Shreya Chaudhary	Internshala (Online)
54.	1873720911	Shubham Kumar Dwivedi	Internshala (Online)
55.	1773720044	Shubham Singh Chauhan	Internshala (Online)
56.	1773720044	Shubham Singh Chauhan	Internshala (Online)
57.	1773720045	Simpi Gupta	Internshala (Online)
58.	1873720912	Sudheer Kumar Maury	Internshala (Online)
59.	1773720046	Sumit Kumar Singh	Internshala (Online)
60.	1773720046	Sumit Kumar Singh	Internshala (Online)
61.	1773720046	Sumit Kumar Singh	Internshala (Online)
62.	1773720048	Surya Prakash Dinkar	Internshala (Online)
63.	1773720049	Swatantra Kumar Azaad	Internshala (Online)
64.	1773720050	Tarun Goel	Internshala (Online)
65.	1773720051	Utkarsh Pratap	Internshala (Online)
66.	1773720052	Vartika Dubey	Internshala (Online)
67.	1773720053	Vidhu Manwal	Internshala (Online)
68.	1773720054	Vikas Chaudhary	Internshala (Online)
69.	1773720055	Vikas Kumar	Internshala (Online)
70.	1773720056	Vikas Tiwari	Internshala (Online)
71.	1773720057	Vinod Kumar Verma	Reliance communications Ltd., Lucknow
72.	1773720058	Vishal	Internshala (Online)
73.	1773720059	Vishwambar Singh	Internshala (Online)
74.	1773720060	Vivek Kumar	NIELIT, Lucknow, Internshala (Online)
75.	1773720061	Yogesh Kumar	Internshala (Online)

Table 2.6 (b): Industry Interactions/training for minimum 1 month duration in session 2018-19

S. No.	Reg. No.	Student Name	Training Place
1.	1673720001	Aakash Gangwar	NTPC Tanda
2.	1673720002	Abhijeet Singh	RAILWAY ELECTRIFICATION DEPT. At CORE (Allahabad)
3.	1673720003	Abhinav Kandu	NTPC Tanda
4.	1673720004	Abhishek Kumar	NTPC Tanda
5.	1673720005	Abhishek Kumar	NTPC Tanda
6.	1673720006	Abhishek Kumar Priyada	Central Engineering Workshop at BPCL,MUMBAI
7.	1673720007	Abhishek Kumar Singh	Uttar Pradesh Power Corporation Limited (UPPCL)
8.	1673720008	Abhishek Pandey	Diesel Traction Training Centre N.E.R Gonda
9.	1673720009	Adarsh Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
10.	1673720010	Adity Ratan	UPPCL
11.	1673720011	Alok Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
12.	1673720012	Alok Paswan	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
13.	1673720013	Aman Singh	NTPC Tanda
14.	1673720014	Amandeep Singh	NTPC Tanda
15.	1673720015	Aryan Singh	NTPC Tanda
16.	1673720016	Asheesh Rajbhar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
17.	1673720017	Ashish Kumar Saroj	UPPCL
18.	1673720018	Ashish Narayan	Parichha thermal power plant Jhansi u.p.
19.	1673720019	Ashwin Kumar Yadav	Diesel Shed Gonda
20.	1673720020	Deepak Kumar Kannaujy	UPPCL
21.	1673720021	Dinesh Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
22.	1673720022	Himanshu Sagar	NTPC Dadri
23.	1673720023	Kapil Kumar	UPPCL
24.	1673720024	Km Renu	NTPC Tanda
25.	1673720025	Krishan Pal Singh	NTPC Tanda
26.	1673720026	Kumari Anjali Singh	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
27.	1673720027	Kumari Savita	NTPC Tanda
28.	1673720028	Lalit Gond	Diesel Traction Training Centre N.E.R Gonda
29.	1673720029	Maneesh Kumar Gupta	NTPC Tanda
30.	1673720030	Manish Kumar Bharati	Diesel Locomotive Works, Varanasi
31.	1673720031	Manoj Kumar	NTPC Tanda

32.	1673720033	Mukul Dev	BHEL Jhansi
33.	1673720034	Neeraj Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
34.	1673720035	Pankaj Gangwar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
35.	1673720036	Pawan Kumar Bharati	NTPC Tanda
36.	1673720037	Prashant Kumar Bandhu	NTPC Tanda
37.	1673720038	Priti Maurya	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
38.	1673720039	Pushendra Singh	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
39.	1673720040	Ravi Shankar Gautam	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
40.	1673720041	Ritik Rajput	NTPC Tanda
41.	1673720043	Robin Singh	North Central Railways (Agra)
42.	1673720044	Sanoj Kumar	NTPC Tanda
43.	1673720045	Sarthak Gupta	NTPC Tanda
44.	1673720046	Satish Kumar	NTPC Tanda
45.	1673720047	Saurabh Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
46.	1673720048	Shalini Patel	NTPC Tanda
47.	1673720049	Shivam Gautam	SUBSTATION ALLAHABAD
48.	1673720050	Shivangi Verma	NTPC Tanda
49.	1673720051	Shivraj Vishwakarma	NTPC Tanda
50.	1673720052	Simran Yadav	NTPC Tanda
51.	1673720053	Somya	SUBSTATION GOMTINAGAR, LUCKNOW
52.	1673720054	Sunil Yadav	NTPC Tanda
53.	1673720055	Sweta Kumari	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
54.	1673720056	Vijay Kumar	NTPC Tanda
55.	1673720058	Vinit Kumar	MATLAB & Its Application in Engineering Internship at REC Ambedkar Nagar
56.	1573720035	Preeti Gautam	Sub-station Division Panki, Kanpur
57.	1773720901	Ankit Kumar Maurya	SUBSTATION KASARA, (MAU)
58.	1773720902	Deeksha Singh	SUBSTATION VARANASHI
59.	1773720903	Deepak Kumar	NTPC Tanda
60.	1773720904	Dheeraj Dharendra Singh Yadav	SUBSTATION NAINI COMPLEX (PRAYAGRAJ)
61.	1773720905	Govind	SUBSTATION AKBARPUR
62.	1773720906	Harendra Pratap Aditya	SUBSTATION GIDAH BASTI
63.	1773720907	Ishwar Chand	SUBSTATION AKBARPUR
64.	1773720908	Km Kajal Prasad	CETPA INFOTECH PVT. LTD., Noida
65.	1773720909	Km Pusaplata	SUBSTATION ANDHAUN, GHAZIPUR
66.	1773720910	Mithlesh Kumar	SUBSTATION HAFIZPUR, AZAMGARH

67.	1773720911	Vivek Bharti	Obra Thermal Power Plant
68.	1673700004	Akash Deep Arya	NTPC Tanda

Table 2.6 (c): Industry Interactions/training for minimum 1 month duration in session 2017-18

S. No.	Reg. No.	Student Name	Training Place
1.	1573720016	Janmejai Tiwari	UPPCL Jaunpur
2.	1573720037	Rajat Singh	RDSO Lucknow
3.	1573720020	Kisan Kumar Jaiswal	NTPC, Tanda
4.	1573720011	Ankit Kumar Singh	REC, Ambedkar Nagar
5.	1673720909	Rinkle Singh	220kv Electrical Transmission Sub Division, Sikandrarao Hathras (UPPTCL)
6.	1673720903	Deepak Kumar Kannaujiya	NTPC Tanda, Ambedkar Nagar
7.	1573720024	Manjeet Vishwakarma	NTPC, Tanda
8.	1673720910	Shamsullaqa	NTPC Tanda
9.	1573720002	Abhishek Rai	MNIT Jaipur
10.	1573720048	Utkarsh Kanth	MNIT Jaipur
11.	1573720009	Anand Kumar Gupta	MNIT Jaipur
12.	1573720019	Khushiram	NTPC Tanda
13.	1573720033	Pawan Kumar	NTPC, Tanda
14.	167379211	Shatrughn	NTPC, Tanda
15.	1573720044	Shilpa Singh	Gandhi park substation div -1 33/11kv
16.	1573720010	Anjali	Madhyanchal Vidyut Vitran Nigam Limited
17.	1673720904	Dheeraj Mishra	UPPTCL Pilipokhar hatras road Agra
18.	1573720027	Mohit Kumar	MNIT, Jaipur
19.	1573720001	Abhinav Kumar Arya	UPPCL, Bhelupur Upkendra
20.	1573720037	Rajat Singh	RDSO Lucknow
21.	1573720003	Ajeet Kumar Sonkar	REC, Ambedkar Nagar
22.	1573720013	Awinash Kumar	REC, Ambedkar Nagar
23.	1573720021	Kishan Kumar	Uppcl bhelupur upkendra Varanasi
24.	1573720039	Rishikant Barman	Summer internship, IIT BHU, Varanasi (UP)
25.	1573720029	Nagesh Kumar	MNIT Jaipur (Rajasthan)
26.	1573720023	Madhu Shukla	NTPC, Tanda
27.	1573720031	Pankaj Kumar Saroj	UPPCL-Substation, Jaunpur
28.	1573720028	Mukteswar Lal	REC Ambedkar Nagar
29.	1573720036	Rahul Kumar	132 KV Substation, Ambedkar Nagar U.P.

30.	1673720905	Gulam Ali Asgar	Mechanical work shop north eastern railway Gorakhpur
31.	1573720025	Manoj Kumar Verma	DLW, Varanasi (UP)
32.	1573720049	Sadhana Priyadarshi	UPPCL, Azamgarh
33.	1573720017	Kavita Singh	BHEL Anpara , Sonbhadra
34.	1573720030	Neeraj Baranwal	Powergrid 220kv substation Raebareli
35.	1573720026	Mohammad Aub Khan	Rajkiya engineering college ambedkarnagar
36.	1573720046	Shivam Maurya	NTPC Tanda
37.	1573720005	Akash Yadav	REC Ambedkar Nagar
38.	1573720008	Amit Kumar Patel	NTPC Tanda

Outcome/ Impact on Students: Industrial exposure with practical/working knowledge.

Table 2.7: MOUs of College with different Industries

S. No.	Industry Name	MOU Date
1.	Pride Engineers, Lucknow	19 th February, 2019
2.	Everest Industries, Prayagraj	04 th November, 2019
3.	ACME Digatek Solutions Pvt. Ltd., Lucknow	21 st January, 2019
4.	Accurate Industrial Controls Pvt. Ltd., Pune	01 st September, 2019
5.	Goyal Computers, Lucknow	19 th February, 2019
6.	Mohd. Sarwar & Sons, Tanda, Ambedkar Nagar	25 th January, 2019
7.	Haji M. Sarwar & Sons, Tanda, Ambedkar Nagar	25 th January, 2019

We are also in process to establish few high end labs in collaboration with industrial organizations of repute.

CRITERION 3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

3.1.1 Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked)- (05)

**Course Name: Electrical Measurements & Instrumentation
Semester: 3 (Session: 2019-20)**

Course Outcomes (COs):

KEE302.1	Evaluate errors in measurement as well as identify and use different types of instruments for the measurement of voltage, current, power and energy.
KEE302.2	Display the knowledge of measurement of electrical quantities resistance, inductance and capacitance with the help of bridges.
KEE302.3	Demonstrate the working of instrument transformers as well as calculate the errors in current and potential transformers
KEE302.4	Manifest the working of electronic instruments like voltmeter, multi-meter, frequency meter and CRO.
KEE302.5	Display the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.

**Course Name: Electrical machine -I
Semester: 4 (Session: 2019-20)**

Course Outcomes (COs):

KEE402.1	Analyze the various principles & concepts involved in Electromechanical Energy conversion.
KEE402.2	Demonstrate the constructional details of DC machines as well as transformers, and principle of operation of brushless DC motor, Stepper and DC Servo motors.
KEE402.3	Evaluate the performance and characteristics of DC Machine as motor and as well as generator.
KEE402.4	Evaluate the performance of transformers, individually and in parallel operation.
KEE402.5	Demonstrate and perform various connections of three phase transformers.

Course Name: Electrical machine -II
Semester: 5 (Session: 2019-20)

Course Outcomes (COs):

REE501.1	Identify different types of machine on the basis of constructional details and demonstrate the principle of operation of AC machines.
REE501.2	Analyze the performance of the Asynchronous and Synchronous Machines using the phasor diagrams and equivalent circuits.
REE501.3	Compute the voltage regulation and efficiency by performing tests on machines.
REE501.4	Identify the suitable AC machine for different applications and assess its significance.
REE501.5	Demonstrate the principle of operation and performance of special machines used in real time applications.

Course Name: Power System Analysis
Semester: 6 (Session: 2019-20)

Course Outcomes (COs):

REE603.1	Ability to understand working, characteristics & applications of Special Electrical Machines (Universal Motor, AC series motor, Hysteresis Motors).
REE603.2	Ability to solve theoretical & numerical problems related with three phase AC Machines (Generator & Motor).
REE603.3	Analysis of some stepper as well Printed Circuit Board motors.
REE603.4	Ability to understand construction, principle of operation, control and performance of permanent magnet brushless D.C. motors.
REE603.5	Ability to solve theoretical & numerical problems related with single and two-phase AC Machines

Course Name: Electric Drives
Semester: 7 (Session: 2019-20)

Course Outcomes (COs):

REE701.1	Understand the basic concept of electric drive
REE701.2	Understand the dynamics of electric drive
REE701.3	Solve and analyze the operation of starting and braking
REE701.4	Application of power electronic controlled converters to DC and AC Drives
REE701.5	Analyze and design of power electronic controlled converters to special electric drives

Course Name: Renewable Energy Resources
Semester: 8 (Session: 2019-20)

Course Outcomes (COs):

ROE086.1	Differentiate and compare different renewable and non-renewable energy resources and also able to showcase his knowledge related to solar photovoltaic applications.
ROE086.2	Demonstrate his knowledge in the area of solar thermal energy including its applications viz solar thermal power plants, solar heating, solar cooling and also able to evaluate the performance of solar flat plate collectors.
ROE086.3	Explain the concept of Geo-thermal energy, Magneto-Hydrodynamics. Fuel Cells, their performance and limitations.
ROE086.4	Demonstrate his knowledge in the area of thermo-electric, thermionic energy conversion and wind energy.
ROE086.5	Elaborate the concept of biomass, ocean thermal energy conversion, wave energy, tidal energy and their principle of operation, performance and limitations.

3.1.2 CO-PO-PSO matrices of courses selected in 3.1.1

(05)

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE302.1	3	1	1	1	1	1	-	3	1	2	1	2	3	3	3
KEE302.2	3	2	2	2	-	1	-	1	1	1	1	2	1	3	3
KEE302.3	3	2	3	2	-	-	1	2	2	2	2	3	3	2	3
KEE302.4	3	-	2	3	1	2	-	3	1	1	1	3	1	3	3
KEE302.5	3	2	2	3	1	1	2	2	2	2	2	2	2	2	3
KEE302	3	1.75	2	2.2	1	1.25	1.5	2.2	1.4	1.6	1.4	2.4	2	2.6	3

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE402.1	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.2	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.3	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.4	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.5	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE501 .1	3	1	2	1	-	2	-	-	-	-	-	-	2	3	1
REE501 .2	3	3	1	1	1	1	-	-	-	-	2	-	2	3	1
REE501 .3	3	3	-	3	2	1	-	-	-	-	-	-	2	3	1

REE501 .4	3	1	1	3	1	2	1	-	1	1	-	1	2	3	1
REE501 .5	3	2	1	2	1	2	1	1	1	-	2	2	2	3	2
REE501	3	2	1.2 5	2	1.2 5	1.6	1	1	1	1	2	1.5	2	3	1.2

1- Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes														
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE603 .1	2	1	-	2	3	-	--	-	-	-	-	2	3	-	-
REE603 .2	3	3	-	1	2	-	2	-	-	-	-	2	3	-	-
REE603 .3	3	2	-	2	2	-	3	-	-	-	-	2	3	-	-
REE603 .4	3	3	-	2	2	-	3	-	-	-	-	2	3	-	-
REE603 .5	3	3	-	1	3	-	2	-	-	-	-	2	3	-	-
REE603	2.8	2.4	-	1.6	2.4	-	2.5	-	-	-	-	2.0	3.0	-	-

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE701. 1	3	3	3	2	1	-	1	-	1	-	1	2	3	2	2
REE701. 2	3	3	3	2	1	-	1	-	1	-	1	2	3	2	2

REE701. 3	3	2	3	2	3	2	1	1	1	-	1	3	3	3	3
REE701. 4	3	3	2	2	1	2	1	1	1	-	2	2	3	3	2
REE701. 5	3	3	3	2	1	3	2	1	1	-	2	3	3	3	3
REE 701	3	2.8	2.8	2	1.4	2.3	1.2	1	1	-	1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
ROE08 6.1	3	3	3	2	1	-	1	-	1	-	1	2	3	2	2
ROE08 6.2	3	3	3	2	1	-	1	-	1	-	1	2	3	2	2
ROE08 6.3	3	2	3	2	3	2	1	1	1	-	1	3	3	3	3
ROE08 6.4	3	3	2	2	1	2	1	1	1	-	2	2	3	3	2
ROE08 6.5	3	3	3	2	1	3	2	1	1	-	2	3	3	3	3
ROE08 6	3	2.8	2.8	2	1.4	2.3	1.2	1	1	-	1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

3.1.3 Program level Course-PO matrix of all courses including first year courses (10)

Table 3.1: Mapping (average scores) of courses with POs

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KOE038	3.00	1.75	2.00	2.20	1.00	1.25	1.50	2.20	1.40	1.60	1.40	2.40	2.40	2.60	3.00
KAS301	2.60	2.00	2.20	1.60	2.20	2.20	1.40	0.00	0.00	0.00	0.00	0.00	2.33	2.00	2.50
KEE301	2.00	1.00	2.00	2.00	2.00	3.00	0.00	0.00	0.00	0.00	1.00	1.00	2.50	1.00	1.50
KEE302	3.00	1.75	2.00	2.20	1.00	1.25	1.50	2.20	2.00	1.60	1.40	2.40	2.00	2.60	3.00
KEE303	3.00	2.60	2.80	2.60	2.40	1.00	1.00	0.00	1.00	2.33	3.00	2.60	2.00	2.00	3.00
KVE401	1.00	1.20	1.20	1.60	1.25	2.60	2.40	3.00	2.40	2.00	2.00	2.00	1.25	1.00	1.00
KAS402	2.60	2.00	2.20	1.60	2.20	2.20	1.40	0.00	0.00	0.00	1.00	1.00	2.60	0.00	0.00
KEE401	2.60	2.00	2.20	1.60	2.20	2.20	1.40	0.00	0.00	1.00	1.00	2.00	2.67	2.00	1.50
KEE402	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	2.00
KEE403	3.00	2.60	2.40	2.40	1.60	0.00	0.00	0.00	0.00	1.80	1.60	2.20	2.80	0.80	2.80
RAS501	2.80	2.60	2.80	2.00	1.40	1.80	1.20	0.80	1.60	1.40	1.40	2.40	2.80	2.40	2.40
RAS502	1.00	1.00	1.00	1.00	0.00	1.40	1.25	2.20	1.40	1.33	1.40	1.40	1.00	1.00	1.00
REE501	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	2.00
REE502	1.20	2.60	0.00	2.20	2.00	0.00	0.00	0.00	0.00	0.00	1.80	3.00	3.00	0.00	0.00
REE503	2.60	2.40	2.40	2.20	1.00	0.00	0.00	0.00	0.00	2.00	1.80	2.20	2.80	0.80	2.60
REE051	3.00	2.40	2.00	1.60	2.40	0.00	2.50	0.00	0.00	0.00	0.00	2.00	3.00	0.00	1.20
RAS601	3.00	2.60	2.80	2.00	1.40	1.80	1.40	1.20	1.80	1.40	1.40	2.40	2.80	2.40	2.40
RUC601	2.67	1.67	1.50	1.00	3.00	1.67	1.00	0.00	0.00	0.00	0.00	0.00	2.20	2.40	0.00
REE601	3.00	2.60	2.00	2.40	1.00	0.00	0.00	0.00	0.00	1.80	1.60	2.20	2.80	0.80	2.80
REE602	2.60	2.00	2.20	1.60	2.20	2.20	1.40	0.00	0.00	1.00	1.00	2.00	3.00	2.00	1.00
REE603	2.80	2.40	0.00	1.60	2.40	0.00	2.50	0.00	0.00	0.00	0.00	2.00	3.00	0.00	0.00
REE064	3.00	2.40	2.20	2.20	1.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	3.00	3.00
ROE071	2.80	2.60	2.80	2.40	2.00	1.80	1.00	0.00	0.00	0.00	0.00	0.00	1.80	1.60	3.00
REE072	3.00	2.60	0.00	1.80	2.80	0.00	1.40	0.00	0.00	0.00	0.00	1.00	3.00	2.00	1.00
REE078	3.00	2.20	2.40	2.00	1.50	1.00	1.00	1.00	1.00	0.00	1.00	2.00	2.00	2.00	1.80
REE701	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00	0.00	1.40	2.40	3.00	2.60	2.40
REE702	3.00	2.60	2.40	1.80	1.00	0.80	0.20	1.00	0.20	0.00	0.40	1.80	2.00	1.80	2.80
ROE086	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00	0.00	1.40	2.40	3.00	2.60	2.40
REE081	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00	0.00	1.40	2.40	3.00	2.60	2.40
REE085	3.00	3.00	2.00	2.20	1.25	1.00	1.00	1.00	1.00	0.00	1.40	2.00	3.00	2.20	1.80

3.2. Attainment of Course Outcomes (50)

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Evaluation of Course Outcomes is based on two major components i.e. Internal Assessment & External Assessment.

- a. **External Assessment:** It has two basic components namely theory exams & practical exams
 - i. For Full Credit Paper: out of 100 marks (% weightage is based upon result of last end semester examination).
 - ii. Half Credit Paper: out of 50 marks (% weightage is based upon result of last end semester examination)

- b. **Internal Assessment:** It accounts for 30 % weightage of the total direct assessment. It has following major components
 - i. Attendance: 20% weightage of total Internal Marks.
 - ii. Teacher's Assessment: 20% weightage of total Internal Marks.
 - iii. Sessional Marks: 60% weightage of total Internal Marks

Details of academic components for internal assessment for attainment of course outcomes

Table 3.2: Internal Assessment processes for Course Outcome

Assessment Type	Assessment Process	Description
Internal Assessment	Sessional/class Tests & its analysis	It accounts for 60% of the total internal marks awarded to students.
	Unit- wise Assignments & its evaluations	Five assignments per subject are allocated during a semester. Each assignment is of 2 marks and a total of maximum 10 marks are included in the final internal evaluation, thus accounting for 20% of the total evaluation.
	Tutorial & quizzes	Important questions are covered in tutorial sessions & Tutorial sheets are prepared for each course as a part of course file. Short answer questions are given to students in quizzes. This helps us to understand the problem solving ability of students.
	participation in various engineering events & student contests	GP marks are allocated for participation. Participation details are documented & marks criteria is decided by Dean student welfare through consultation.
	Class presentations	GP marks are allocated. Class presentations are done for each course.
	Project presentations	Students are required to give at least 2-3 presentations for final year project in front of faculty members & project supervisors. Major criteria for evaluation include completion of work, meeting with supervisor, originality of work, individual efforts etc. The evaluations are documented & final marks are based on the cumulative results. Final year project accounts for 200 marks in external & 100 marks in internal evaluation.
	Industrial training viva-voce & mini project	Students are required to present their mini-project developed during Industrial training in VII th semester. They also submit a project report for the mini project.
	Lab Assignments & Viva Voce	Lab assignments are given during each lab session. Viva-Voce of is conducted twice a semester. Viva voce is based on parameters like completion of file, viva, attendance, experiment execution.

Assessment Process

We have defined the following criteria for defining the Attainment level of Course Outcomes

Attainment of course outcome is defined at three levels

Internal Assessment

Attainment No: Less than 40% students scoring less than 60% as class average marks.

Attainment Yes: Greater than or equal to 60% students scoring 60% as class average marks.

External Assessment (Theory Exams)

Attainment No: Less than 40% students scoring less than 60% as class average marks.

Attainment Yes: Based upon the result of last semester result level. For few subjects 60% or more and for few subjects 45% or more.

Total attainment for Course outcome is based on External & Internal Assessment as per the following rule:

Total Attainment: 30% of Internal Assessment + 70% of External Assessment

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Table 3.3: Attainment of Course Outcomes for 2019-20

Courses	CO 1	CO 2	CO 3	CO 4	CO 5
KOE038	71.01	70.43	70.43	69.86	71.74
KAS301	71.09	76.00	55.27	62.36	54.72
KEE301	61.37	65.00	61.37	60.34	60.34
KEE302	59.76	56.13	57.44	56.86	51.93
KEE303	73.09	73.67	74.69	72.95	73.67
KVE401	89.51	89.51	90.54	90.98	89.07
KAS402	66.14	66.14	62.77	66.14	66.14
KEE401	60.18	60.18	60.00	56.48	59.64
KEE402	90.50	91.45	91.45	75.37	60.23
KEE403	59.26	58.66	57.86	57.66	60.66
RAS501	78.78	80.00	79.59	81.62	63.78
RAS502	82.88	83.29	75.32	83.83	83.96
REE501	51.62	70.54	66.75	31.75	47.83
REE502	63.98	66.19	62.90	67.08	61.50
REE503	55.82	56.62	56.42	55.42	56.02
REE051	61.36	63.75	64.69	63.02	65.81
RAS601	88.24	89.46	89.05	91.08	73.24
RUC601	96.80	96.80	96.80	96.40	96.80
REE601	64.17	64.77	63.17	64.37	64.17
REE602	66.77	60.59	61.92	67.65	65.89
REE603	62.16	60.98	59.81	57.45	67.16
REE064	78.56	75.85	95.58	94.50	78.29
ROE071	79.34	79.19	72.68	79.04	79.04
REE072	71.44	76.00	63.79	70.12	79.60
REE078	90.61	88.48	85.30	90.45	89.85
REE701	85.66	83.38	82.17	85.20	85.20
REE702	62.14	60.94	60.94	59.74	63.14
ROE086	83.13	82.53	76.92	83.28	82.98
REE081	85.61	85.91	74.39	85.61	85.15
REE085	91.92	91.92	82.68	92.22	92.22

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

3.3.1 Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Assessment tools are broadly classified into two categories i.e. **Direct Assessment & Indirect Assessment**. Total attainment for PO & PSO is calculated by considering **70% of direct assessment & 30% of indirect assessment**. Assessment tools are used as per given below:

Direct Assessment Tools

- Weightage distribution of course outcome of each course for internal and external exam.
- Percentage distribution of marks of each course as per the university scheme.
- Course performance index each course from course outcomes.

Indirect Assessment Tools

- Graduate Exit Survey
- Alumni Survey
- Placement and GATE Exam

Process for PO & PSO attainment through Direct Assessment method

The overall direct assessment process is described through following steps:

Step 1: First each course is decomposed into sub-elements representing course outcomes.

Step 2: For each of the defined sub-elements, co-relation is defined with individual program outcomes by the concerned subject teachers. Co-relation is assigned at three levels: 1 for low co-relation, 2 for Moderate Co-relation and 3 for strong co-relation.

Step 3: Weightage distribution in % is assigned to each of the defined course elements. Weightage is primarily based on two major aspects.

- Internal Assessment:** Weightage is based on marks allocated to each sub-element in Sessional exams & teaching hours consumed.
- External Assessment:** Weightage is based on marks allocated to each sub-element in university exams.

Step 4: Course Performance Index for Internal Exams (IE_{CPI}) & External exams (EE_{CPI}) is defined as per the following criteria

- Course Performance Index for Internal Exams (IE_{CPI}): % of students securing Sessional Marks Average $\geq 60\%$
- Course Performance Index for External exams (EE_{CPI}) : % of students securing Sessional Marks Average $\geq 45\%$

Direct Assessment	External Examination(EE)	Internal Examination(IE)	Total
Total Marks as per scheme	100	50	150
% distribution of marks as per University Scheme Index (USI)	66.6% (EE_{USI})	33.3% (IE_{USI})	100%

Course Performance Index (CPI)	EE _{CPI} % of students securing Sessional Marks Average $\geq 50\%$	IE _{CPI} % of students securing Sessional Marks Average $\geq 70\%$	
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where

EE_{cpi}: Course performance Index for External Exam

IE_{cpi}: Course performance Index for Internal Exam

Step 5: We have defined the following Rule for CO attainment for each individual Course objectives (Course elements):

Performance Index (PI) for each defined course elements:

- **Performance Index (PI) for Internal exams (IE_{PI})**= Weightage distribution of individual course element $W_{IE(i)} * IE_{USI} * IE_{CPI}$
- **Performance Index (PI) for External exams (EE_{PI})**= Weightage distribution of individual course element $W_{EE(i)} * EE_{USI} * EE_{CPI}$

Where

$W_{IE(i)}$ = weightage distribution for i^{th} course outcome

IE_{USI} = the university scheme Index (USI) for internal exams

EE_{USI} = the university scheme Index (USI) for external exams

IE_{CPI} = the Course Performance Index (CPI) for Internal exams

EE_{CPI} = the Course Performance Index (CPI) for external exams

As an example, for the above considered course NEE601, we obtain performance indexes as follows

Table 3.4: Performance Index for each CO

Attainment Method	NEE – 601.1	NEE – 601.2	NEE – 601.3	NEE – 601.4	NEE – 601.5	NEE – 601.6
Weightage for External Exam (EE _{pi})	1.8	7.5	0.0	13.1	7.5	3.7
Weightage for Internal Exams (IE _{pi})	2.0	3.0	1.0	6.1	4.1	3.0
SUM	3.9	10.6	1.0	19.3	11.6	6.8

Step 6: Now we calculate the attainment index for each defined course element % of CO attainment = Sum of Performance Index (API_i)*100/ Average Weightage (AW)

Table 3.5: Percentage of CO Attainment

Attainment Method	NEE – 601.1	NEE – 601.2	NEE – 601.3	NEE – 601.4	NEE – 601.5	NEE – 601.6
% of CO attainment	73.1	64.83	73.1	72.59	67.41	68.97

Step 7:

we calculate the attainment level for each course outcomes as follows

If % of CO attainment is <40 then Attainment Level will be 0 (mark ‘-’)

Finally,

- If % of CO attainment is ≥ 40 and < 45 then Attainment Level will be 1
- If % of CO attainment is ≥ 45 and < 55 then Attainment Level will be 2
- If % of CO attainment is ≥ 55 then Attainment Level will be 3

Step 8: Finally we determine the attainment of each PO & PSO. For this we first put the obtained **CO Attainment Level Value** corresponding to all the mapped POs & PSOs as shown in table below.

Table 3.6: CO Attainment Level

Attainment Method	NEE – 601.1	NEE – 601.2	NEE – 601.3	NEE – 601.4	NEE – 601.5	NEE – 601.6
% of CO attainment	52.47	60.65	0.00	59.51	58.19	54.76
Attainment Level (1,2,3)	2	3	0	3	3	2
Mapped POs	1,2,3, 12	1,2,3,4, 5,6,12	1,2,3,4,5, 6,12	1,2,3,4,5, 6,11,12	1,2,3,4,5, 6,11,12	1,2,3,4,5, 6,11,12
Mapped PSOs	1,2,3, 4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3,4

Attainment for a particular PO is then obtained by taking the averages of corresponding attainment levels for each course element as shown in table below. Finally we record the averages of PO & PSO for all courses.

Step 9: Averages of attainment levels for each PO & PSO corresponding to all courses is then recorded.

Table 3.7: PSO Attainment

Course Outcome	PSO1	PSO2	PSO3	PSO4
REE – 601.1	2	2	2	2
REE – 601.1	2	2	2	2
REE – 601.1	-	-	-	-
REE – 601.1	2	2	2	2
REE – 601.1	2	2	2	2
REE – 601.1	2	2	2	2
Averages of PSO Attainment	1.67	1.67	1.67	1.67

B] Process for PO & PSO attainment through In-Direct Assessment method

We have considered following assessment tools for indirect assessment.

1. Graduate Exit Survey
2. Course End Survey
3. Survey on PO & PSO Attainment
4. Alumni survey
5. Placement & National level exams

Attainment values have been calculated from survey forms filled by students on sample size of more than 100 surveys. Averages of attainment values corresponding to each PO & PSO are calculated using Graduate Exit Survey as depicted in the following table:

Rajkiya Engineering College Ambedkar Nagar

Exit Survey Format of Program Outcomes (POs) and Program Specific Outcomes (PSOs) for B.Tech. Electrical Engineering 2020

PO No.	PO Description	Exit survey question	Rating		
			1	2	3
PO1	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.	To what level you are able apply the engineering concept to solve the problem			
PO2	Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	To what extent you are able to analyse and formulate the problems			
PO3	Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	To what level you are able design Electrical engineering problems			
PO4	Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	To what level you are able analyse and interpret the data			
PO 5	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	To what level you are able use state of art tools for Electrical engineering activities			
PO6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	To what level you are able analyse societal health legal cultural issues related to Electrical engineering practices			
PO7	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	To what level you are able understand environmental context and needor sustainable development			
PO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	To what level you are able understand ethical principles and responsibilities			
PO9	Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	To what extent you are able understand the functions effectively as an individuals and leader of diverse team			
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	To what level you are able communicate the complex engineering problems			
PO11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	To what level you are able demonstrate knowledge and the project management principles			
PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest	To what extent you are able analyse the lifelong learning			

	context of technological change, for succeeding in competitive exams and other aspects.	technique related Electrical engineering			
PSO 1	An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.	To what extent able you are able to understand the fundamentals of electric power system			
PSO 2	An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.	To what level you are able to develop the analyse and control the electric drive system			
PSO 3	An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.	To what level you have understood control and automation applications.			

1-Low; 2- Medium; 3- High

Name _____ Roll no _____ Class _____

Table 3.8: Average attainment of each assessment method w.r.t each POs and PSOs

POs/PSOs & rating	1	2	3	Attainment	% Attainment
PO1	5	17	38	2.55	85.00
PO2	0	15	45	2.75	91.67
PO3	1	9	50	2.82	93.89
PO4	2	18	40	2.63	87.78
PO5	3	17	40	2.62	87.22
PO6	2	13	45	2.72	90.56
PO7	0	14	46	2.77	92.22
PO8	4	16	40	2.60	86.67
PO9	4	15	41	2.62	87.22
PO10	1	9	50	2.82	93.89
PO11	1	9	50	2.82	93.89
PO12	2	13	45	2.72	90.56
PSO1	2	13	45	2.72	90.56
PSO2	2	11	47	2.75	91.67
PSO3	1	3	56	2.92	97.22

Total attainment of PO & PSO is finally obtained by taking averages of two following components:

1. 70% of attainment through direct assessment
2. 30% of attainment through in-direct assessment

3.3.2. Provide results of evaluation of each PO & PSO (40)

Table 3.9: Program Outcome attainment (2019-20)

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KOE038	70.93	71.01	70.88	70.91	71.11	70.84	71.35	70.96	91.14	71.05	71.01	70.88	70.95	70.88	70.93
KAS301	56.56	44.01	49.78	41.33	46.28	35.19	35.19	0.00	0.00	0.00	0.00	0.00	52.75	47.12	51.06
KEE301	53.57	41.44	45.46	33.01	45.22	45.15	0.00	0.00	0.00	0.00	12.14	8.11	32.53	8.11	12.27
KEE302	56.43	32.56	37.46	40.89	18.73	23.46	26.88	41.65	37.14	30.08	26.10	45.24	37.90	49.13	56.43
KEE303	73.24	73.44	73.36	73.44	73.12	74.11	73.96	0.00	58.76	74.09	58.76	73.25	73.28	73.96	73.24
KVE401	90.50	90.37	90.37	90.12	90.77	90.10	90.07	90.07	90.15	90.07	90.07	90.07	90.77	90.07	90.07
KAS402	56.87	43.65	48.06	36.79	47.83	48.06	26.23	0.00	0.00	0.00	13.00	8.82	0.00	0.00	0.00
KEE401	53.45	46.76	46.76	33.39	46.74	40.08	26.72	0.00	0.00	20.00	20.00	40.00	40.06	26.68	6.68
KEE402	81.80	81.80	81.80	81.80	27.27	27.27	27.27	54.53	54.53	54.53	54.53	81.80	81.80	81.80	54.53
KEE403	58.82	50.82	47.00	47.00	31.44	0.00	0.00	0.00	0.00	35.26	31.34	43.05	54.91	15.77	54.91
RAS501	71.42	66.01	71.31	51.17	36.20	44.92	29.84	20.33	39.39	35.33	35.28	60.73	71.42	60.73	60.73
RAS502	26.85	27.72	28.17	26.85	0.00	38.50	34.10	60.81	49.59	37.09	38.42	38.55	28.17	28.17	28.17
REE501	53.70	53.70	53.70	53.70	17.90	17.90	17.90	35.80	35.80	35.80	35.80	53.70	53.70	53.70	35.80
REE502	25.64	55.67	0.00	47.82	43.11	0.00	0.00	0.00	0.00	0.00	0.00	62.20	64.33	0.00	0.00
REE503	48.53	44.91	44.91	41.11	18.69	0.00	0.00	0.00	0.00	37.38	26.12	41.07	52.37	14.86	48.61
REE051	63.73	55.32	52.48	31.88	42.73	0.00	38.57	0.00	0.00	0.00	0.00	43.50	63.73	0.00	25.33
RAS601	86.21	74.20	80.14	57.47	40.61	50.59	39.56	33.67	50.40	39.74	39.69	68.29	80.25	68.29	68.29
RUC601	86.04	53.73	48.72	32.27	96.80	53.64	32.27	0.00	0.00	0.00	0.00	0.00	70.91	77.39	0.00
REE601	64.13	55.57	42.75	55.53	21.38	0.00	0.00	0.00	0.00	38.47	34.24	47.04	59.84	17.14	59.85
REE602	56.04	42.69	0.00	32.50	47.17	0.00	0.00	0.00	0.00	0.00	0.00	42.60	64.56	0.00	0.00
REE603	46.19	37.80	0.00	31.50	37.80	0.00	14.00	0.00	0.00	0.00	0.00	21.00	50.39	0.00	0.00
REE064	84.56	67.91	62.74	61.59	38.48	28.19	27.78	25.73	27.36	28.19	28.19	28.19	84.56	84.56	84.56
ROE071	83.36	78.40	77.64	55.58	37.71	64.06	33.47	27.29	27.79	0.00	34.68	66.22	83.36	71.95	66.22
REE072	66.88	62.20	0.00	34.55	67.42	0.00	34.13	0.00	0.00	0.00	0.00	24.06	72.18	39.62	23.97
REE078	88.88	64.84	71.23	59.25	44.02	29.63	29.63	29.63	29.63	0.00	29.34	59.25	59.31	59.62	53.59
REE701	84.14	78.67	78.45	56.09	38.98	65.54	33.72	28.05	28.05	0.00	35.03	67.23	84.14	72.92	67.23
REE702	61.38	53.25	49.11	36.79	20.46	16.25	4.06	20.46	4.06	0.00	8.12	36.93	40.92	36.77	57.23
ROE086	81.53	76.40	75.99	54.35	37.43	62.99	32.67	26.92	27.18	0.00	33.92	64.97	81.53	70.50	64.97
REE081	83.39	78.43	77.69	55.60	37.72	64.09	33.51	27.29	27.80	0.00	34.75	66.26	83.39	71.97	66.26
REE085	90.16	90.16	59.47	65.61	36.77	29.65	30.05	29.10	29.10	0.00	44.43	60.11	90.16	65.62	53.33
% PO Direct	66.83	59.78	52.18	49.66	42.00	34.01	28.10	20.74	23.60	20.90	27.83	47.10	62.47	45.24	44.47
% PO Indirect	85.00	91.67	93.89	87.78	87.22	90.56	92.22	82.22	87.22	93.89	93.89	90.56	90.56	91.67	97.22
% PO Overall	72.28	69.35	64.69	61.10	55.56	50.97	47.33	39.19	42.68	42.80	47.65	60.14	70.90	59.17	60.30

CRITERION 4	STUDENTS' PERFORMANCE	150
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4. STUDENTS' PERFORMANCE

(150)

Table 4.1: Student Information

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
Sanctioned intake of the program (<i>N</i>) (first year)	63	63	63
Total number of students admitted in first year <i>minus</i> number of students migrated to other programs/institutions plus no. of students migrated to this program (<i>N1</i>)	63	63	62
Number of students admitted in 2 nd year in the same batch via lateral entry (<i>N2</i>)	6	6	6
Separate division students, if applicable (<i>N3</i>)	-	-	-
Total number of students admitted in the Program (<i>N1 + N2 + N3</i>)	69	69	70

Table 4.2(a): Student Performance (without backlogs)

Year of Entry	<i>N1 + N2 + N3</i> (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	69 (63+6+0)				
CAYm1 (19-20)	69 (63+6+0)	57		-	-
CAYm2(18-19)	70 (62+6+2)	59	58+6+2		
CAYm3(17-18)	73 (61+12+0)	41	42+10+1	50+11+1	
CAYm4 LYG (16-17)	70 (58+12+0)	30	30+8+0	50+8+0	57+12+0
CAYm5 LYGm1(15-16)	59 (47+12+0)	25	40+10	46+11	47+12
CAYm6(LYGm2)(14-15)	58(49+9+0)	30	31+3	48+6	49+9

Table 4.2(b): Student Performance (Graduated)

Year of Entry	<i>N1 + N2 + N3</i> (As defined above)	Number of students who have successfully graduated			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	69 (63+6+0)				
CAYm1 (19-20)	69 (63+6+0)	69			
CAYm2(18-19)	70 (62+6+2)	70	62+6+2		
CAYm3(17-18)	73 (60+12+1)	60	60+12+1	60+12+1	
CAYm4 LYG (16-17)	70 (58+12+0)	58	58+12+0	58+12+0	57+12+0

CAYm5 LYGm1(15-16)	59 (47+12+0)	47	47+12	47+12	47+12
CAYm6(LYGm2)(14-15)	58 (49+9+0)	49	49+9	49+9	49+9

4.1. Enrolment Ratio (20)

Year of Entry	Enrolment Ratio= N1/N
CAY	63/63 = 1.00
CAY m1	63/63 = 1.00
CAYm2	62/63 = 0.98
Mean Enrolment Ratio = 0.995	

Table 4.3: Enrolment Ratio percentage

Item	Enrolment Ratio= N1/N	Marks
>=90% students enrolled at the First Year Level on average basis during the period of assessment	99.5	20
>=80% students enrolled at the First Year Level on average basis during the period of assessment	.	
>=70% students enrolled at the First Year Level on average basis during the period of assessment		
>=60% students enrolled at the First Year Level on average basis during the period of assessment		
Otherwise	.	

4.2. Success Rate in the stipulated period of the program (40)

4.2.1. Success rate without backlogs in any semester/year of study (25)

Table 4.4: Success Rate (without backlogs)

Item	Latest Year of Graduation, LYG(CAYm4) (2016-20)	Latest Year of Graduation minus 1, LYGm1 (CAYm5) (2015-19)	Latest Year of Graduation minus 2, LYGm2 (CAYm6) (2014-18)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	70 (58+12)	59 (47+12)	58 (49+9)
Number of students who have graduated without backlogs in the stipulated period	31 (25+6)	29 (21+8)	28(25+3)
Success Index (SI)	0.44	0.49	0.48
Average SI	0.47		

$$\begin{aligned}
 \text{Success rate without backlogs in any year of study} &= 25 \times \text{Average SI} \\
 &= 25 \times 0.47 \\
 &= 11.75
 \end{aligned}$$

4.2.2. Success rate in stipulated period (15)

Table 4.5: Success Rate in stipulated period

Item	Latest Year of Graduation, LYG(CAY _{m4})	Latest Year of Graduation minus 1, LYG _{m1} (CAY _{m5})	Latest Year of Graduation minus 2, LYG _{m2} (CAY _{m6})
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	72 (60+12)	59 (47+12)	58 (49+9)
Number of students who have graduated with and without backlogs in the stipulated period	71(59+12)	59 (47+12)	58 (49+9)
Success Index (SI)	0.986	1.00	1.00
Average SI	0.995		

$$\begin{aligned}
 \text{Success rate with and without backlogs in any year of study} &= 15 \times \text{Average SI} = 15 \times 0.995 = 14.93
 \end{aligned}$$

4.3. Academic Performance in Third year (15)

Table 4.6: Academic Performance in third year

Academic Performance	CAY _{m1}	CAY _{m2}	CAY _{m3}
Mean of CGPA or Mean Percentage of all successful students(X)	7.18	7.05	7.01
Total no. of successful students (Y)	73	70	59
Total no. of students appeared in the examination (Z)	73	70	59
API = x* (Y/Z)	AP1 = 7.18	AP2 = 7.05	AP3 = 7.01
Average API = (AP1 + AP2 + AP3)/3	7.08		

$$\begin{aligned}
 \text{Academic Performance} &= 1.5 * \text{Average API (Academic Performance Index)} \\
 &= 1.5 * 7.08 \\
 &= 10.62
 \end{aligned}$$

4.4. Academic performance in Second year (15)

Table 4.7: Academic Performance in second year

Academic Performance	CAY _{m1}	CAY _{m2}	CAY _{m3}
Mean of CGPA or Mean Percentage of all successful students(X)	7.08	7.12	6.91
Total no. of successful students (Y)	70	73	70

Total no. of students appeared in the examination (Z)	70	73	70
API = X* (Y/Z)	7.08	7.12	6.91
Average API = (AP1 + AP2 + AP3)/3	7.04		

$$\begin{aligned}
 \text{Academic Performance Level} &= 1.5 * \text{Average API (Academic Performance Index)} \\
 &= 1.5 * 7.04 \\
 &= 10.56
 \end{aligned}$$

4.5. Placement, Higher Studies and Entrepreneurship (40)

Assessment Points = 40 × average placement

Table 4.8: Placement & higher study details

Item	CAYm1 (2019-20)	CAYm2 (2018-19)	CAYm3 (2017-18)
Total No. of Final Year Students (N)	68	59	58
No. of students placed in companies or Government Sector (x)	03	23	-
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	01	-	-
No. of students turned entrepreneur in engineering/technology (z)	-	-	-
x + y + z =	04	23	0
Placement Index : (x + y + z)/N	0.16	0.39	0
Average placement=(P1 + P2 + P3)/3	0.18		

Professional Activities (20)

4.6.1 Professional societies/chapters and organizing engineering events (5)

Table 4.9 A: Professional Societies/Chapters details

Sr. No.	Societies/Chapters	Membership ID	Membership date
1.	IEEE (USA)-Student Branch	STB11386	05 November, 2018
2.	IEEE (USA)-PES Student Branch Chapter	SBC11386	30 March, 2019
3.	IEEE (USA)-WIE Student Branch Affinity Group	SBA11386	23 March, 2019
4.	IE (India)	IM000634-5	27 June, 2019

Table 4.9 B: Organizing Engineering Events Workshop/Training/Short term course details

Sr. No.	Name of program	Organizer	Duration with Date
1.	One Week FDP on Power System Optimization and Control (PSOC)	REC Ambedkar Nagar through TEQIP-III of AKTU	5 days (December 14-18, 2020)

2.	International Seminar on “Recent Advances in Science and technology(ISRAST-2020)	REC Ambedkar Nagar through TEQIP-III	2 days (February 16-17, 2020)
3.	International Conference (REC-CON-19)	REC Ambedkar Nagar through TEQIP-III	2 days (November 28-29, 2019)
4.	One week workshop on “Environmental Management for Eco-Friendly Infrastructure Development”	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One week workshop on “Robotics Workshop cum Championship (ROBOFIESTA)	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
6.	One Week short term Course On “Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell”	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
7.	“Developing Critical thinking using Learning Management System (LMS) and ICT tools”	REC Ambedkar Nagar through TEQIP-III	One week (August 05-09, 2019)
8.	Four Week Summer Internship on “MATLAB and its Application in Electrical Engineering	REC Ambedkar Nagar through TEQIP-III	Four week (17 June-15 July 2019)
9.	Four Week Summer Internship on “Open Source software- SCILAB, e-SIM”	Self-Sponsored	Four week (10 June-10 July 2019)
10.	Faculty Development Program On “Essentials of Teaching-Learning process and research Methodology”	REC, Ambedkar Nagar through TEQIP-III	One week (February 04-08, 2019)
11.	National Workshop on “Nurturing Start-up/Entrepreneurial Skills in Budding Engineers”	REC, Ambedkar Nagar through TEQIP-III	One week (February 15-19, 2019)
12.	One Week short term Course On “Real time Simulation of FACTS and HVDC through ICT”	In collaboration with NITTTR Chandigarh	One week (January 20-February 02, 2019)
13.	One week National workshop on “MATLAB & its application in Engineering”	Entruple Technologies Pvt. Ltd	One week (January 20-February 02, 2019)
14.	Week short term Course On “Artificial Intelligence & optimization through ICT”	In collaboration with NITTTR Chandigarh	One week (January 21-25, 2019)
15.	One Week short term Course On “Recent Advances in Electrical engineering”	REC, Ambedkar Nagar through TEQIP-III	One week (April 10-14, 2018)

16.	Ansys Maxwell	Entruple Technologies Pvt. Ltd	1 day (February 02, 2018)
17.	Workshop on “Outcome Based Education (OBE)”	REC Ambedkar Nagar through TEQIP-III	2 days (September 09-10, 2018)
18.	ICT course on “Scilab Programming”	In collaboration with NITTTR Chandigarh	One week (May 14-18, 2018)
19.	Short Term training program On Laboratory and Workshop Management “	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

4.6.2 Publication of Technical Magazines, Newsletters, etc. (5)

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

Electrical Engineering section is published in Newsletter published at college website (http://recabn.ac.in/?page_id=2478) with following issues:

- News Letter (September, 2019)
- News Letter (August, 2019)
- News Letter (July, 2019)
- News Letter (May & June, 2019)
- News Letter (April 2019)
- News Letter (March 2019)
- News Letter (February 2019)
- News Letter (January 2019)
- News Letter (December 2018)
- News Letter (November 2018)
- News Letter (July to October 2018)

4.6.3 Participation in Inter-Institute events by students of the program of study (10)

Table 4.10: Participation in Inter-Institute Events

S. No.	College Event	Organizer	Event Date	Remarks, if any
1.	AKTU Technical, Literary and Management Fest	REC Ambedkar Nagar at Zonal level	8-9, 14 Nov, 2019	Technical activities: Bridge Kirti, Coding contest, Frugal engineering, Robo race, Robo war, Technical poster, Working model.
2.	AVIGHNA 2018	REC, Ambedkar Nagar	04-07 April, 2018	-

3.	TVARAN 18 (Inter-college Sports Festival)	KNIT, Sultanpur	22-24 Feb. 2018	Participation: Boys: 36, Girls: 56
4.	ASMITA 18 (Inter-college Sports Festival)	IIIT, Allahabad, KNIT, Sultanpur, BHU, Varanasi	9-11 Feb. 2018	Participation: Boys: 20
5.	AVIGHNA 16	REC, Ambedkar Nagar	12-15 April 2018	-

CRITERION 5	FACULTY INFORMATION AND CONTRIBUTIONS	200
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5. FACULTY INFORMATION AND CONTRIBUTIONS

(200)

Faculty details for the session 2020-21 (Upto December 2020)

Table 5.1 Faculty Details (2020-21 Upto December 2020)

S.No.	Name of the Faculty Member	Qualification(Starting From Highest)	UNIVERSITY	Year of Graduation	All Designations since joining the institution	DOJ	Distribution of Teaching Load (%)				Academic Research			Sponsored/Funded Research	Consultancy/Product Development	Specialization
							1st Year	UG (EE Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance	Research Publications			
1.	Dr. S. P. Singh	Ph. D. (EE) M.Tech. (Control & Instrumentation) B.E. (EEE)	Ph.D. (MNNIT, Allahabad) M.Tech. (MNNIT, Allahabad) B. E. (Dr. B. R. Ambedkar University, Agra)	Ph.D.(2014)	Associate Professor	30/12/2017		100%				4	116	02		Power Quality Improvement, Renewable Energy Sources
2.	Dr. Arif Iqbal	Ph. D. (EE) M.Tech. (Power System & Drives) B. Tech. (EE)	Ph.D. (I.I.T. Roorkee) M.Tech. (A.M.U. Aligarh) B. Tech. (A.M.U. Aligarh)	PhD(2015)	Assistant Professor	11/12/2017		100%					20			Multiphase AC machines, Power Electronics, Renewable energy
3.	Dr. Mohammed Aslam Husain	Ph. D. (EE) M.Tech. (Power System & Drives) B.Tech. (EE)	Ph.D. (A.M.U. Aligarh) M.Tech. (A.M.U. Aligarh) B. Tech. (A.M.U. Aligarh)	PhD(2017)	Assistant Professor	11/12/2017		100%				01	35	02	01	Grid Tied Inverters; Nature inspired Optimization Techniques for electrical engineering problems.
4.	Dr. Sanjay Agarwal	Ph. D. (EE) M.Tech. (EE) B.Tech. (EE)	Ph.D. (M.N.N.I.T Allahabad) M.Tech. (NIT Hamirpur) B.Tech. (U.P.T.U. Lucknow)	PhD(2017)	Assistant Professor	(11-12-2017)		100%				01	10	01		Power System Protection, Power Quality,
5.	Dr. Puneet Joshi	Ph. D. (EE) M.Tech. (Electrical Energy Systems) B.E. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	Assistant Professor	(11-12-2017)		100%					10			Artificial Intelligence Power Electronics, Renewable energy, Power System.

6.	Mr. Lokesh Kumar Yadav	Ph. D. (Pursuing) M.Tech. (Control System) B.Tech. (EN)	Ph.D.Pursuing (IIT BHU) M.Tech. (NIT Patna)	2014	Assistant Professor	(11-12-2017)												Power System Stability, optimization technique
7.	Dr. Yudhisthir Pandey	Ph.D (Submitted) M.Tech (Energy & Environment Management) B. E (Electrical & Electronics Engineering)	Ph.D (Jamia Millia Islamia, New Delhi) M. Tech (IIT, Delhi)	B.E.(2002), M. Tech (2011)	Lecturer, Sr. Lecturer, Assistant Professor	(11-12-2017)												Electrical Power System Deregulated Environment
8.	Mr. Sonu Kumar	M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M.Tech (NIT hamirpur, HP)	M.Tech -2013 B.Tech - 2009	Assistant Professor	(11-12-2017)												Electrical Machine, Power system, Power Electronics
9.	Mr. Vikas Patel	Ph.D (pursuing) M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M. Tech. (MMMUT Gorakhpur)	M.Tech -2014	Assistant Professor	(11-12-2017)	58.33%											Renewable Energy, Power Electronics, Electrical Drives, Electrical Machines
10.	Mr. Ravindra Kumar	Ph.D (pursuing) M. tech (Electrical Engineering) M.Sc. (Electronics & Instrumentation)	Ph.D. (UTU, Dehradun) M.Tech -(KNIT Sultanpur)	M.Tech -2011	Assistant Professor (Contractual Basis)	(13-08-2019)												Power Electronics & Drives.
11.	Mr. Jaswant Singh	Ph.D (pursuing) M.Tech (Power Electronics & Drives) B.Tech (Electrical Engineering)	M.Tech. (AKTU, Lucknow) B.Tech. (AKTU, Lucknow)	M.Tech (2011)	Assistant Professor (Contractual Basis)	(01-09-2020)												Power Electronics and Electric Drives
12.	Ms. Shikha Choudhary	Ph.D (pursuing) M.Tech (Instrumentation Engineering) B.Tech (Electronics and Instrumentation Engineering)	M.Tech (S.G.G.S.I.E&T, Nanded) B.Tech (U.P.T.U)	M.Tech (2014)	Assistant Professor(Contractual Basis)	(21-07-2018)												Bio-Medical Instrumentation, Bio-Signal Processing

Note: Faculty members from Serial 1 to 9 are regular and others are on contract basis.

Faculty from other Departments

S.N	Name of the Faculty Member	Qualification(Starting From Highest)	University	Year of Graduation	All Designations since joining the institution	DOJ	Distribution of Teaching Load (%)				Academic Research			Sponsored/Funded Research	Consultancy/Product Development	Specialization
							1st Year	UG (EE Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance	Research Publications			
1.	Prof. V. S. Chandel	Ph. D.	Lucknow University		Professor	15/06/2017		100				02	65	01		Electronics
2.	Dr. Prabhudatt Dwivedi	Ph.D.	MNNIT, Allahabad	2011	Assistant Professor	11/12/2017		33%	67%	-		-	10	-	-	Marketing Management
3.	Dr. Sushant Chaturvedi	Ph.D.	University of Allahabad, Allahabad	Ph.D (2012)	Assistant Professor	18/12/2017		33%	67%				10			English
4.	Dr. Ashok Kumar Upadhyay	Ph. D.	Purvanchal University, Jaunpur	Ph.D (2004)	Assistant Professor(Contractual)	01-09-2020		33%	67%				-			Mathematics
5.	Mr. Hemant Kumar Baranwal	M. Tech. (CSE)	Dr. APJ AKTU, Lucknow	2016	Assistant Professor(Contractual)	01-09-2020		100%					01			Computer Science
6.	Ms. Kumkum Dubey	M. Tech. (IT)	MMMUT, Gorakhpur	2017	Assistant Professor(Contractual)	01-09-2020		100%					19			Computer Science

Note: Faculty members from Serial 1 to 4 are regular and others are on contract basis.

Faculty details for the session 2019-20

Table 5.2 Faculty Details (2019-20)

S. No.	Name of the Faculty Member	Qualification(Starting From Highest)	UNIVERSITY	Year of Graduation	All Designations since joining the institution	DOJ	Distribution of Teaching Load (%)			Academic Research			Sponsored/Funded Research	Consultancy/Product Development	Specialization
							1st Year	UG (EE Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance			
1.	Dr. S. P. Singh	Ph. D. (EE) M.Tech. (Control & Instrumentation) B.E. (EEE)	Ph.D. (MNNIT, Allahabad) M.Tech. (MNNIT, Allahabad) B.E. (Dr. B. R. Ambedkar University, Agra)	Ph.D..(2014)	Associate Professor	30/12/2017		100%				4	108	02	Power Quality Improvement, Renewable sources
2.	Dr. Arif Iqbal	Ph. D. (EE) M.Tech. (Power System & Drives) B.Tech. (EE)	Ph.D. (I.I.T. Roorkee) M.Tech. (A.M.U. Aligarh) B.Tech. (A.M.U. Aligarh)	PhD(2015)	Assistant Professor	11/12/2017		100%					15		Multiphase AC machines, Power Electronics, Renewable energy
3.	Dr. Mohammed Aslam Husain	Ph. D. (EE) M.Tech. (Power System & Drives) B.Tech. (EE)	Ph.D. (A.M.U. Aligarh) M.Tech. (A.M.U. Aligarh) B.Tech. (A.M.U. Aligarh)	PhD(2017)	Assistant Professor	11/12/2017		100%				1	33	011	Grid Tied Inverters; Nature inspired Optimization Techniques for electrical engineering problems;
4.	Dr. Sanjay Agarwal	Ph. D. (EE) M.Tech. (EE) B.Tech. (EE)	Ph.D. (M.N.N.I.T Allahabad) M.Tech. (NIT Hamirpur) B.Tech. (U.P.T.U. Lucknow)	PhD(2017)	Assistant Professor	(11-12-2017)		100%				1	10		Power System Protection, Power Quality,
5.	Dr. Puneet Joshi	Ph. D. (EE) M.Tech. (Electrical Energy Systems) B.E. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	Assistant Professor	(11-12-2017)		100%					10		Soft Computing, Power Electronics, Renewable energy.
6.	Mr. Lokesh Kumar Yadav	Ph. D. (Pursuing) M.Tech. (Control System) B.Tech. (EN)	Ph.D.Pursuing (IIT BHU) M.Tech. (NIT Patna)	2014	Assistant Professor	(11-12-2017)		100%					2		Power System Stability, optimization technique

7.	Dr. Yudhishtir Pandey	Ph.D (Submitted) M.Tech (Energy & Environment Management) B. E (Electrical & Electronics Engineering)	Ph.D (Jamia Millia Islamia, New Delhi) M. Tech (IIT, Delhi)	M. B.E (2002), M. Tech (2011)	Lecturer, Sr. Lecturer, Assistant Professor	(11-12-2017)												11			Electrical Power System Deregulated Environment
8.	Mr. Sonu Kumar	M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M.Tech (NIT hamirpur, HP)	M.Tech -2013 B. Tech - 2009	Assistant Professor	(11-12-2017)												5			Electrical Machine, Power system, Power Electronics
9.	Mr. Vikas Patel	Ph.D (pursuing) M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M.Tech -(MMMUT Gorakhpur)	M. Tech -2014	Assistant Professor	(11-12-2017)	58.33%	41.67%										6			Renewable Energy, Power Electronics, Electrical Drives, Electrical MACHINE
10.	Mr. Ravindra Kumar	Ph.D (pursuing) M. tech (Electrical Engineering) M.Sc. (Electronics & Instrumentation)	Ph.D. (UTU, Dehradun) M. Tech -(KNIT Sultanpur)	M. Tech -2011	Assistant Professor (Contractual Basis)	(13-08-2019)		100%										11			Power Electronics & Drives.
11.	Mr. Abdul Hafeez	M.Tech (Instrumentation and Control) B. Tech. (Electrical Engineering)	M.Tech. (A.M.U. Aligarh) B.Tech. (A.M.U. Aligarh)	M.Tech (2013)	Assistant Professor (Contractual Basis)	(13-08-2019)	12.5%	87.5%										8			Instrumentation and Control
12.	Mr. Sunil Kumar Jain	M.Tech (Power Electronics) B.Tech (Electrical Engineering)	M.Tech (MNIT Allahabad) B.Tech (MMMEC, Gorakhpur)	M. Tech(2010)	Assistant Professor(Contractual Basis)	(30-08-2019)	12.5%	87.5%										2			Power Electronics

Note: Faculty members from Serial 1 to 9 are regular and others are on contract basis.

Faculty from other Departments

S.No.	Name of the Faculty Member	Qualification(Starting From Highest)	University	Year of Graduation	All Designations since joining the institution	DOJ	Distribution of Teaching Load (%)				Academic Research			Sponsored/Funded Research	Consultancy/Product Development	Specialization
							1st Year	UG (EE Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance	Research Publications			
1.	Dr. D. P. Mishra	Ph.D.	CPET, Lucknow	2011	Assistant Professor	01/06/2012		100				14				Chemistry
2.	Dr. Prabhudatt Dwivedi	Ph.D.	MNNIT, Allahabad	2011	Assistant Professor	11/11/2017		50	-	-		10	-	-		Marketing Management
3.	Mr. Vivekanand Singh	M.Tech.	M.Tech (IIT Delhi)	M.Tech. 2012	Assistant Professor	11/12/2017	66.6%	33.3%				-				Production Engineering
4.	Dr. Amit Kumar Pandey	Ph.D.	MNNIT, Allahabad	2014 (Ph.D)	Assistant Professor	11/12/2017	0	100%				20				VLSI Design
5.	Dr. Sushant Chaturvedi	Ph.D.	University of Allahabad, Allahabad	Ph.D (2012)	Assistant Professor	18/12/2017						10				English
6.	Dr. Amit Kumar Singh	Ph.D	IIT, BHU, Varanasi	Ph.D.(2014)	Assistant Professor	11/12/2017						12				Mathematics
7.	Dr. Ashok Kumar Upadhyay	Ph.D	Purvanchal University, Jaunpur	Ph.D (2004)	Assistant Professor	18-07-2018		50				-				Mathematics

Note: Faculty members from Serial 1 to 6 are regular and others are on contract basis.

Faculty details for the session 2018-19

Table 5.3 Faculty Details (2018-19)

S. No.	Name of the Faculty Member	Qualification(Starting From Highest)	UNIVERSITY	Year of Graduation	All Designations since joining the institution		Distribution of Teaching Load (%)				Academic Research			Specialization	
						DOJ	1st Year	UG (EE Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance	Research Publications		Sponsored/Funded Research
1.	Dr. S. P. Singh	Ph. D. (EE) M.Tech. (Control & Instrumentation) B.E. (EEE)	Ph.D. (MNNIT, Allahabad) M.Tech. (MNNIT, Allahabad) B.E. (Dr. B. R. Ambedkar University, Agra)	Ph.D.(2014)	Associate Professor	30/12/2017		100%				4	101	01	Power Quality Improvement, Renewable Energy
2.	Dr. Arif Iqbal	Ph. D. (EE) M.Tech. (Power System & Drives) B.Tech. (EE)	Ph.D. (I.I.T. Roorkee) M.Tech. (A.M.U. Aligarh) B.Tech. (A.M.U. Aligarh)	PhD(2015)	Assistant Professor	11/12/2017		100%					14		Multiphase AC machines, Power Electronics, Renewable energy
3.	Dr. Mohammed Aslam Husain	Ph. D. (EE) M.Tech. (Power System & Drives) B.Tech. (EE)	Ph.D. (A.M.U. Aligarh) M.Tech. (A.M.U. Aligarh) B.Tech. (A.M.U. Aligarh)	PhD(2017)	Assistant Professor	11/12/2017		100%					28	010	Grid Tied Inverters; Nature inspired Optimization Techniques for electrical engineering problems;
4.	Dr. Sanjay Agarwal	Ph. D. (EE) M.Tech. (EE) B.Tech. (EE)	Ph.D. (M.N.N.I.T Allahabad) M.Tech. (NIT Hamirpur) B.Tech. (U.P.T.U. Lucknow)	PhD(2017)	Assistant Professor	(11-12-2017)		100%					8		Power System Protection, Power Quality,
5.	Dr. Puneet Joshi	Ph. D. (EE) M.Tech. (Electrical Energy Systems) B.E. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	Assistant Professor	(11-12-2017)		100%					7		Soft Computing, Power Electronics, Renewable energy.
6.	Mr. Lokesh Kumar Yadav	Ph. D. (Pursuing) M.Tech. (Control System) B.Tech. (EN)	Ph.D.Pursuing (IIT BHU) M.Tech. (NIT Patna)	2014	Assistant Professor	(11-12-2017)		100%					2		Power System Stability, optimization technique

7.	Mr. Yudhisthir Pandey	Ph.D (Submitted) M.Tech (Energy & Environment Management) B. E (Electrical & Electronics Engineering)	M. Tech (IIT, Delhi)	M. B.E (2002), M. Tech (2011)	Lecturer, Sr. Lecturer, Assistant Professor	(11-12-2017)													7			Electrical Power System Deregulated Environment
8.	Mr. Sonu Kumar	M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M.Tech (NIT hamirpur, HP)	M.Tech -2013 B.Tech - 2009	Assistant Professor	(11-12-2017)													5			Electrical Machine, Power system, Power Electronics
9.	Mr. Vikas Patel	Ph.D (pursuing) M. tech (Electrical Engineering) B.Tech (Electrical Engineering)	M.Tech -(MMMUT Gorakhpur)	M.Tech -2014	Assistant Professor	(11-12-2017)	58.33%	41.67%											6			Renewable Energy, Power Electronics, Electrical Drives, Electrical MACHINE
10.	Mr. Ravindra Kumar	Ph.D (pursuing) M. tech (Electrical Engineering) M.Sc. (Electronics & Instrumentation)	Ph.D. (UTU, Dehradun) M.Tech -(KNIT Sultanpur)	M.Tech -2011	Assistant Professor	(11-09-2018)		100%											8			Power Electronics & Drives.
11.	Ms. Shikha Choudhary	M.Tech (Instrumentation Engineering) B.Tech (Electronics and Instrumentation Engineering)	M.Tech (S.G.G.S.I.E&T, Nanded) B.Tech (U.P.T.U)	M.Tech (2014)	Assistant Professor(Contractual Basis)	(21-07-2018)		100%											4			Bio-Medical Instrumentation, Bio-Signal Processing
12.	Ms. Shashi Pandey	M.Tech (Control & Instrumentation) B.Tech (Electrical and Electronics Engineering)	M.Tech (MMMUT Gorakhpur) B.Tech (U.P.T.U)	M.Tech(2017)	Assistant Professor(Contractual Basis)	(18-07-2018)		100%											10			Restructuring, Price Deregulation, Price Forecasting TechForecasting

Note: Faculty members from Serial 1 to 9 are regular and others are on contract basis.

Faculty from other Departments

S. No.	Name of the Faculty Member	Qualification(Starting From Highest)	University	Year of Graduation	All Designations since joining the institution	DOJ	Distribution of Teaching Load (%)				Academic Research			Sponsored/Funded Research	Consultancy/Product Development	Specialization
							1st Year	UG (CS Dept)	UG(Other Program)	M.Tech	Faculty Receiving PhD during the Assessment Period	PhD Guidance	Research Publications			
1.	Dr. D. P. Mishra	Ph. D.	CPET, Lucknow	2011	Assistant Professor	01/06/2012		100				13				Organic Chemistry
2.	Dr. Prabhudatt Dwivedi	Ph. D.	MNNIT, Allahabad	2011	Assistant Professor	11/11/2017		50	-	-		10	-	-		Marketing Management
3.	Mr. Vivekanand Singh	M. Tech	M.Tech (IIT Delhi)	M.Tech. 2012	Assistant Professor	11/12/2017	66.6%	33.3%				-				Production Engineering
4.	Dr. Amit Kumar Pandey	Ph. D.	MNNIT, Allahabad	2014 (Ph.D)	Assistant Professor	11/12/2017	50%	50%				19				VLSI Design
5.	Dr. Sushant Chaturvedi	Ph. D.	University of Allahabad, Allahabad	Ph.D (2012)	Assistant Professor	18/12/2017	50%	50%				9				English
6.	Dr. Amit Kumar Singh	Ph. D	IIT, BHU, Varanasi	Ph.D.(2014)	Assistant Professor	11/12/2017	50%	50%				11				Mathematics
7.	Dr. Ashok Kumar Upadhyay	Ph. D	Purvanchal University, Jaunpur	Ph.D (2004)	Assistant Professor	18-07-2018		50				-				Mathematics

Note: Faculty members from Serial 1 to 6 are regular and others are on contract basis.

5.1. Student-Faculty Ratio (SFR) (20)

S: F ratio = N/F; N=No. of students= 3x where x is (approved intake + 20% lateral entry intake+ separate division, if any)

F = No. of faculty = (a+b-c) for every assessment year

- Total number of full-time regular Faculty serving fully to 2nd, 3rd and 4th year of this program
- Total number of full-time equivalent regular Faculty (considering fractional load) serving this program from other Program(s)
- Total number of full time equivalent regular Faculty (considering fractional load) of this program serving other program(s)

Table 5.4: Student Faculty Ratio

Year	X	N = 3X (Actual student strength)	F	SFR=N/F
CAY (2020-21)	64	192	17	11.30
CAYm1 (2019-20)	64	192	16	12.00
CAYm2 (2018-19)	65	195	16	12.18
Average SFR for three Assessment Years				11.83

Required as per 15:1 ratio

CAY 15

CAYm1 15

CAYm2 15

Marks allocated= 10

Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 20:1, and zero for average SFR higher than 20:1.

15:1 →20

16:1 →18

17:1 →16

18:1 →14

19:1 →12

20:1 →10

5.2. Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

- F1: Number of Professors required = 1/9 x Number of Faculty required to comply with 15:1 Student-Faculty ratio based on no. of students (N) as per 5.1=1
- F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 15:1 Student-Faculty ratio based on no. of students (N) as per 5.1=3
- F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 15:1 Student-Faculty ratio based on no. of students (N) as per 5.1= 8

Table 5.5: Faculty Cadre Ratio

	PROFESSORS		ASSOCIATE PROFESSORS		ASSISTANT PROFESSORS	
CAY (2020-21)	1	0	3	1	8	8+3*
CAYm1 (2019-20)	1	0	3	1	8	8+3*
CAYm2 (2018-19)	1	0	3	1	8	8+3*
Average No.	RF1=1	AF1=0	RF2=3	AF2=1	RF3=8	AF3=11
	0		0.20		0.55	

*Contractual faculty included

$$\text{Cadre Ratio Marks} = \left[\left[\frac{\text{AF1}}{\text{RF1}} \right] + \left[\frac{\text{AF2} \times 0.6}{\text{RF2}} \right] + \left[\frac{\text{AF3} \times 0.4}{\text{RF3}} \right] \right] \times 12.5$$

$$\text{Cadre Ratio Marks} = \{ 0 + 0.2 + 0.55 \} \times 12.5 = 9.375$$

5.3. Faculty Qualification

(25)

FQ = 2.5 x [(10X + 6Y)/F] where x is no. of regular faculty with Ph. D., Y is no. of regular faculty with M. Tech., F is no. of regular faculty required to comply 1:15 Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per 5.1)

Table 5.6: Faculty Qualification

Session	X	Y	F	FQ=2.5 x [(10X + 6Y)/F]
CAY (2020-21)	6	6	12	20
CAYm1 (2019-20)	6	6	12	20
CAYm2 (2018-19)	5	7	12	19.17
Average Assessment				19.72

5.4 Faculty Retention

(25)

No. of regular faculty members in

CAY (2020-21) = 9

CAYm1 (2019-20) = 9

CAYm2 (2018-19) = 9

Table 5.7: Faculty Retention

Items	Marks
>=90% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	25
>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	20
>=60% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	15
>=50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	10
<50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	0

5.5. Innovations by the Faculty in Teaching and Learning (20)**Departmental Initiatives****Table 5.8: Innovations by the Faculty in teaching and learning**

S. No.	INNOVATIONS IN TEACHING AND LEARNING	RESOURCE/REFERENCE	IMPACT ON TEACHING & LEARNING
1.	<u>LEARNING VIA ONLINE CERTIFICATIONS</u> (Promoting online student certifications (free))	Online	
2.	<u>LEARNING WITH MINI-PROJECTS & MAJOR PROJECTS</u> Inclusion of mini-project per subject is must	online	Helps in reducing the gap between theory & practicals
3.	<u>LEARNING WITH GROUP DISCUSSIONS, APTITUDE DEVELOPMENT, MOCK INTERVIEWS</u>	Part of our teaching learning process	Helps in all round development of students
4.	<u>LEARNING WITH CLASSROOM PRESENTATIONS</u> <ul style="list-style-type: none"> Each student is allocated one topic for each of the subjects. Student presents his/her topic in class covering the learnt concepts in innovative manner 	Contents from covered syllabus	Confidence building for public speaking
5.	<u>CLASSROOM TEACHING</u> <ul style="list-style-type: none"> Use of practical examples Interaction with students Involving students through question-answer sessions Lesson Observations Involving potential students by putting surprise questions 	Resources are available through on-line class Class monitoring of classroom teaching	Enhancement of overall quality of teaching

	<ul style="list-style-type: none"> • Revision/ask questions from previous lecture • Maintenance of proper discipline in class • Use of real world examples 	with adequate facility	
6.	<p><u>STUDENT COUNSELLING</u></p> <ul style="list-style-type: none"> • Allocation of small group of students to each faculty for mentorship • Faculty counselor involve students in individual viva-voce & their academic monitoring • Allocation of group projects to students • Faculty counselor maintains the student portfolios which records all the academic activities of students 	Well formatted & documented student portfolios	Confidence building to students & more involvement of students in teaching learning process
7.	<p><u>LAB SESSIONS</u></p> <ul style="list-style-type: none"> • Each lab experiment covers a) Experiment Objectives b) Introduction of concepts c) Algorithm/Model d) Implementation details with code e) practical applications w.r.t the experiment f) conclusion & references • Coverage of labs beyond the experiments • Regular viva-voce & monitoring of lab sessions • Group lab assignments • Comparative performance evaluations wherever applicable • Recognition of best lab assignments 	Proper maintenance of lab records	<p>Mapping of theoretical concepts with practical implementations</p> <p>Understanding of real-time applications</p> <p>Performance evaluation of students</p> <p>Skill development</p>
8.	<p><u>INNOVATION IN STUDENT PROJECTS</u></p> <ul style="list-style-type: none"> • Each student undergoes a one-year project • Very close monitoring of project progress • Great emphasis on development research based projects, useful real world applications, significance & presentation of results • few industrial projects are also issued in collaboration with some industry 	Proper record maintenance of project records	<p>Few results are published</p> <p>Technical skill development</p> <p>Learning of project development cycle</p> <p>Improves the writing & presentation skills</p>
9.	<p><u>USE OF TEACHING AIDS</u></p> <ul style="list-style-type: none"> • Well prepared PPTs 	Quality Web contents	Quality contents & web

<ul style="list-style-type: none"> • Video lectures like NPTEL • E-notes & solutions • Use of standard books 		references to students
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5.6. Faculty as participants in Faculty Development/Training Activities/STTPS (15)

- A Faculty scores maximum five points for participation
- Participation in 2 to 5 days Faculty development program: 3 Points
- Participation >5 days Faculty development program: 5 points

Table 5.9: Participants in FDP/Training activities/STTPS

S.No	FACULTY	CAY(2020-21)	FACULTY	CAYm1(2019-20)	FACULTY	CAYm2(2018-19)
1.	Dr. S. P. Singh	12	Dr. S. P. Singh	9	Dr. S. P. Singh	30
2.	Dr. Yudhishtir Pandey	8	Dr. Yudhishtir Pandey	12	Mr. Yudhishtir Pandey	36
3.	Dr. Arif Iqbal	9	Dr. Arif Iqbal	5	Dr. Arif Iqbal	21
4.	Dr. Mohmmmed Aslam Hussain	10	Dr. Mohmmmed Aslam Hussain	15	Dr. Mohmmmed Aslam Hussain	30
5.	Dr. Puneet Joshi	8	Dr. Puneet Joshi	27	Dr. Puneet Joshi	27
6.	Mr. Lokesh Yadav	3	Mr. Lokesh Yadav	12	Mr. Lokesh Yadav	24
7.	Mr. Sonu Kumar	6	Mr. Sonu Kumar	6	Mr. Sonu Kumar	15
8.	Dr. Sanjay Agarwal	10	Dr. Sanjay Agarwal	9	Dr. Sanjay Agarwal	25
9.	Mr. Vikas Patel	-	Mr. Vikas Patel	30	Mr. Vikas Patel	30
10.	Mr. Jaswant Singh	18	Mr. Abdul Hafeez	10	Ms. Shikha Chaudhary	6
11.	Mr. Ravindra Kumar	9	Mr. Ravindra Kumar	10	Mr. Ravindra Kumar	9
12.	Ms. Shikha Chaudhary	-	Mr. Sunil Jain	-	Ms. Shashi Pandey	-
	SUM	93		145		253
	RF= Number of Faculty required to comply with 15:1 Student-Faculty ratio as per 5.1	12		12		12

	Assessment = 3 × (Sum/0.5RF)	46.5		72.5		126.5
	Average Marks (Marks limited to 15)	81.83				

5.7. Research and Development (30)

5.7.1. Academic Research (10)

Table 5.10 (a): Total Publications

S. No.	Faculty members	Paper Publications (Journals and conferences)	h-index	i10-index	Paper Publication in SCI Journal	Books/Book Chapters
1.	Dr. S. P. Singh	116	12	12	3	2
2.	Dr. Mohammed Aslam Husain	35	7	7	8	3
3.	Mr. Vikas Patel	6	1	-	-	-
4.	Dr. Puneet Joshi	10	2	2	1	6
5.	Dr. Sanjay Agrawal	10	5	2	3	5
6.	Dr. Yudhishtir Pandey	13	12	-	1	2
7.	Mr. Lokesh Kumar Yadav	3	-	-	-	-
8.	Dr. Arif Iqbal	20	5	3	6	-
9.	Mr. Sonu Kumar	5	-	-	-	-
10.	Mr. Jaswant Singh	20	5	3	-	1
11.	Mr Ravindra Kumar	14	3	-	-	-
12.	Ms. Shikha Chaudhary	4	-	-	-	-

Table 5.10 (b): Total books published by Faculty

S. No.	Title	Publisher	ISBN No.& Year of Publication	Authors
1.	Elements of Power System	Standard Publishers Distributors	978-81-8014-249-9 2018	Er. Jaswant Singh , Dr. S. P. Singh
2.	Metaheuristic and Evolutionary Computation: Algorithms and Applications	Springer	978-981-15-7511-6 2020	Dr. Puneet Joshi, Dr. Sanjay Agrawal
3.	Pricing of Electricity in Restructured Power System in OPF	LAP Lambert Academic	978-620—0-7803-2 2019	Dr. Yudhishtir Pandey
4.	Electromagnetic Field Theory	Shubham Publications	2007	Dr. Yudhishtir Pandey
5.	DC Motor control – A case study: Four Quadrant DC Motor Speed control with Microcontroller	BookRix	9783743885806 2018	Dr. M. Aslam Husain
6.	Wind-PV Hybrid Generation	LAP Lambert Academic	978-36-59533938 2014	Dr. M. Aslam Husain, Abu Tariq

Table 5.10 (c): Article/Chapters Published in Books

S. No.	Chapter Title	Book Title	ISBN No. & Year of Publication	Authors
1.	“Performance Evaluation of Brushless DC Motor Drive Supplied from Hybrid Sources”	Applications of Artificial Intelligence Techniques in Engineering, Springer Nature Singapore Pvt. Limited	978-981-13-1821-4 2018	Dr. S. P. Singh, Krishna Kumar Singh, Dr. Bhavnesk Kumar
2.	Accurate Equivalent Circuit Model for Battery States Estimation	Applications of Computing, Wireless System in Electrical Engineering, Springer, Singapore	978-981-13-6771-7 2019	Dr. M. Aslam Husain
3.	Aspects involved in the modelling of PV system, Comparison of	System Architecture, Springer, Singapore	9778-981-10-8533-8 2018	Dr. M. Aslam Husain

	MPPT schemes, and study of different ambient conditions using P & O Method			
4.	Simulation and Analysis of Everyday use Electric Vehicle	Algorithm for Intelligent System, Springer	978-981-33-6306-9 2021	Dr. M. Aslam Husain
5.	Introduction to Condition monitoring of PV System	Soft Computing in Signal Monitoring and Diagnosis of Electrical & Mechanical System	978-981-15-1532-3 20202	Dr. Pineet Joshi, Dr. Sanjay Agrawal, Mr. Lokesh Kumar Yadav
6.	Soft Computing Methods and its applications in Condition Monitoring of DGs: A Review	Soft Computing in Signal Monitoring and Diagnosis of Electrical & Mechanical System	978-981-15-1532-3 2020	Dr. Pineet Joshi, Dr. Sanjay Agrawal, Mr. Lokesh Kumar Yadav
7.	Applications of Metaheuristic In Power Electronics	Metaheuristic and Evolutionary Computation: Algorithms and Applications	978-981-15-7511-6 2020	Dr. Puneet Joshi, Dr. Sanjay Agrawal, Mr. Lokesh Kumar Yadav
8.	Trackling Power Quality Issues using Metaheuristic	Metaheuristic and Evolutionary Computation: Algorithms and Applications	978-981-15-7511-6 2020	Dr. Puneet Joshi, Dr. Sanjay Agrawal, Mr. Lokesh Kumar Yadav
9.	Cuckoo Search Algorithm: A review of Recent Variants and Engineering Applications	Metaheuristic and Evolutionary Computation: Algorithms and Applications	978-981-15-7511-6 2020	Dr. Puneet Joshi, Dr. Sanjay Agrawal, Mr. Lokesh Kumar Yadav

Table 5.11: Ph D. Guidance by Faculty

S. No.	Faculty member	Designation	No. of Ph.D. students guided for last 04 years	
			Guided	Pursuing
1.	Dr. S. P. Singh	Associate Professor	-	04
2.	Dr. Yudhishthir Pandey	Assistant Professor	-	-
3.	Dr. Arif Iqbal	Assistant Professor	-	-
4.	Dr. Mohmmed Aslam Husain	Assistant Professor	-	01
5.	Dr. Puneet Joshi	Assistant Professor	-	-
6.	Mr. Lokesh Kumar Yadav	Assistant Professor	-	-
7.	Mr. Sonu Kumar	Assistant Professor	-	-
8.	Dr. Sanjay Agarwal	Assistant Professor	-	01
9.	Mr. Vikas Patel	Assistant Professor	-	-
10.	Mr. Jaswant Singh	Assistant Professor	-	-
11.	Mr Ravindra Kumar	Assistant Professor	-	-
12.	Ms. Shikha Chaudhary	Assistant Professor	-	-

5.7.2. Sponsored Research**(5)****Table 5.12: Government Sponsored Research Project**

Name of the research project	Amount	Name of funding Agency	Year of sanction	Duration of project	Status
Development of IoT and Drone Based Agriculture Monitoring System with Objective of Skill Development of Socially Deprive Community	Rs. 44.648 Lakhs	MEITY, New Delhi	2020	2 Years	On-going
Integrated Renewable Resources: Storage operation and Management in Smart Grid	Rs. 3 Lakhs	CRIP TEQIP-III AKTU, Lucknow	2019	1 Year	Completed
Development of a novel fast MPPT algorithm based solar PV system with shade tolerance for rural applications	9.68 Lakhs	CST UP (DST UP)	2018	2 Years	Completed

5.7.3. Development activities (10)

5.7.4. Consultancy (from industry) (5)

1. Consultancy works for the hand over process of 220 kV New Tanda-Sohawal PGCIL transmission line from UPPTCL Ayodhya, UP. The PI of this consultancy work is **Dr. M. Aslam Husain** and he has submitted the final report to UPPTCL Ayodhya (U.P.) in the month of August 2020.
2. Consultancy work for the hand over process of 220 kV NTPC Tanda-New Tanda transmission line from UPPTCL Ayodhya, UP. The PI of this consultancy work is **Dr. M. Aslam Husain** and he has submitted the final report to UPPTCL Ayodhya (U.P.) in the month of September 2020.

5.8. Faculty Performance Appraisal and Development System (FPADS) (30)

(a) System for faculty appraisal

The College duly recognizes the efforts of the faculty members for any academic achievement or innovative practice. Such innovations are evaluated and are given due acknowledgements in the annual appraisals for faculty members. The College has put in place a well-designed convenient 'self-appraisal system' for its faculty. Each faculty member is required to submit a self-appraisal report (SAR) annually on the basis of parameters such as teaching hours, number of subjects taught, research papers/articles/books published, conferences attended, papers presented in the conferences, new curricula designed/developed, participation in extra-curricular/co-curricular activities, extra responsibilities assigned by the University, and other contributions made towards the society. The self-appraisal report of the teaching staff is duly verified by the Heads of the respective Teaching Departments and thereafter at the dean level before its final acceptance by the Director. The performance appraisal of the non-teaching staff is equally important for efficient running of an institution.

The SAR of the faculty members is based upon many parameters which are to be filled in proper detail. These parameters relate to:

- General Information
- Details of teaching carried out in past one year
- Participation in university activities (evaluation, paper setting, etc.)
- Innovations/contribution teaching related activities
- Professional competency improvement through workshop/seminar/conference/summer schools etc.
- Research contribution (Ph.D. /M Tech. guidance and research papers/projects)
- Contribution to community service
- Participation in corporate life (co-curricular activities, student welfare and discipline)

5.9. Visiting/Adjunct/Emeritus Faculty etc. (10)

Provision of inviting/having visiting/adjunct/emergitus faculty

- Proposal submission to Director for approval (covering remuneration aspect also) for majority of cases.

- Invitation through email/post/telephonic as per the requirement.
- For training related invitations from the industry, proposals are invited from targeted Industries.
- For conferences, workshops, FDP activities, invitations are sent in bulk to many resource persons.

Table 5.13: STC/Workshop/Conference/FDP/SIP Organized in Electrical Engg. Department

Sr. No.	Name of program	Organizer	Duration with Date
1.	International Seminar on “Recent Advances in Science and technology(ISRAST-2020)	REC Ambedkar Nagar through TEQIP-III	2 days (February 16-17 ,2020)
2.	International Conference (REC-CON-19)	REC Ambedkar Nagar through TEQIP-III	2 days(November 28-29 ,2019)
3.	One week workshop on “Environmental Management for Eco-Friendly Infrastructure Development”	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
4.	One week workshop on “Robotics Workshop cum Championship (ROBOFIESTA)	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One Week short term Course On “Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell”	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
6.	“Developing Critical thinking using Learning Management System (LMS) and ICT tools”	REC Ambedkar Nagar through TEQIP-III	One week (August05-09, 2019)
7.	Four Week Summer Internship on “MATLAB and its Application in Electrical Engineering	REC Ambedkar Nagar through TEQIP-III	Four week (17 June-15 July 2019)
8.	Four Week Summer Internship on “Open Source software- SCILAB,e-SIM”	Self-Sponsored	Four week (10 June-10 July 2019)
9.	Faculty Development Program On “Essentials of Teaching-Learning process and research Methology”	REC Ambedkar Nagar through TEQIP	One week (February 04-08, 2019)
10.	National Workshop on “Nurturing Start-up/Entrepreneurial Skills in Budding Engineers”	REC Ambedkar Nagar through TEQIP	One week (February 15-19, 2019)
11.	One Week short term Course On “Real time Simulation of FACTS and HVDC through ICT”	In collaboration with NITTTR Chandigarh	One week (January 20-February02, 2019)
12.	One week National workshop on “MATLAB & its application in Engineering”	Entuple Technologies Pvt. Ltd	One week (January 20-February02, 2019)
13.	Week short term Course On “Artificial Intelligence & optimization through ICT”	In collaboration with NITTTR Chandigarh	One week (January 21-25, 2019)

14.	One Week short term Course On “Recent Advances in Electrical engineering”	REC Ambedkar Nagar through TEQIP-III	One week (April 10-14, 2018)
15.	“One day Workshop : Ansys Maxwell”	Industry	1 day (February 02, 2018)
16.	Workshop on “Outcome Based Education (OBE)”	REC Ambedkar Nagar through TEQIP	2 days (September 09-10, 2018)
17.	ICT course on “Scilab Programming”	In collaboration with NITTTR Chandigarh	One week (May 14-18, 2018)
18.	Short Term training program On Laboratory and Workshop Management “	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

Table 5.14: Details of Expert Lectures Organized

Sr. No.	Name & Affiliation of Recourse Person	Title of Expert talk	Date
1.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Humanities course for engineering& technology-A case study of AICET model Curriculum	16/01/2020
2.	Dr. Pushendra Singh, REC Banda	Speed Control of Three Phase Induction Motor	15/11/2019
3.	Mr. Abhijeet Singh, REC Banda	Basics of EM Waves	14/11/2019
4.	Er. Sube Singh Gurjar, RCMA (HAL, Korwa), Amethi	Power supply and EMI/EMC Aspect in military Aircraft	03/10/2019
5.	Dr. Faiz Minai, Integral University, Lucknow	Renewable Energy	29/08/2019
6.	Mr. Om Krishan Singh, Scientist, MEITY, New Delhi	Research and Innovative Funding opportunities	16/07/2019
7.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Application of particle swarm optimization	30/03/2019
8.	Er. Krishna Mohan Pandey & Mr. Chandra Mohan Pandey SOFCON Trainer Lucknow	MATLAB	26/02/2019
9.	Mr. Suraj Pandey & Mr. Mustakeem Ahmad SOFCON Trainer Lucknow	PLC/SCADA	25/02/2019
10.	Er. Sube Singh Gurjar, RCMA (HAL, Korwa), Amethi	Evolution of flight data Recorder & Certification for military application	08/05/2018
11.	Prof. S K Chaturvedi	Reliability Engineering and its Applications	21/04/2018

CRITERION 6	Facilities and Technical Support	80
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6. FACILITIES AND TECHNICAL SUPPORT (80)

6.1. Adequate and well equipped laboratories, and technical manpower (30)

Table 6.1: Lab Facility and Technical Manpower

SR. NO.	NAME OF LABORATORY	NO. OF STUDENTS PER SETUP (BATCH SIZE)	NAME OF IMPORTANT EQUIPMENT	WEEKLY UTILIZATION STATUS (ALL THE COURSES FOR WHICH THE LAB IS UTILIZED)	TECHNICAL MANPOWER SUPPORT		
					NAME OF TECHNICAL STAFF	DESIGNATION	QUALIFICATION
1.	Power Electronics Lab	30	Setup for studying SCR characteristics; UJT trigger ckt.; 1 phase half wave controlled rectifier; 1 phase half wave Bridge rectifier; 3 phase half wave Bridge rectifier; 1-phase FHP Induction motor speed control; micro-controller based 1-phase cyclo-controller; triggering of IGBT/MOSFET chopper ckt.; 1-phase inverter ckt.	4 hrs per week	Mr. Sanjay Maurya	Lab Assistant	ITI
2.	Power System Lab	30	Setup for studying LG,LL,LLG,LLL faults; IDMT relay; location of faults by cable fault test; Ferranti effect; transformer oil test; MHO,Reactance, Distance relay; negative & positive sequence reactance of alternator	4 hrs per week	Mr. Vivek Tiwari	Lab Assistant	ITI
3.	Electrical Engg Lab	30	Setup for KVL, KCL; superposition, Thevenin's, Maximum power transfer; Power, Power factor measurement; resonance in RLC ckt.; 2 wattmeter method of power measurement; 1 phase energy meter; parameters of ac single phase series RLC circuit; dc shunt motor load test; load test of a single phase transformer	8 hrs per week	Mr. Kundan Kumar	Lab Assistant	B.Tech. (EE)
4.	EMEC Lab (Electromechanical Energy Conversion-I & II)	30	Setup for studying different characteristics various DC generators, controlling of DC motors and transformer; 1 and 3 phase induction motor; 3-phase alternator; 3-phase synchronous motor	4 hrs per week	Mr. Kundan Kumar & Mr. Sujeet Verma	Lab Assistant	B.Tech. (EE) & ITI respectively
5.	Electric Drives Lab	30	Setup for obtaining different characteristics and different speed control mechanisms of different types of DC motors, 1 & 3 phase induction motors using power electronics and other approaches.	4 hrs per week	Mr. Krishna Kumar	Lab Assistant	Diploma (EE)
6.	Micro Processor Lab	30	Setup of 8085,8086,8086A microprocessor system; Pentium Processor; and various other programming based experimental setup	4 hrs per week	Mr. Rajmani Verma & Mr. Rahul Verma	Lab Assistant	Both ITI
7.	Communication Lab	30	Setup to study amplitude modulation using a transistor and determine depth of modulation; generation of DSB-SC signal using balanced modulator; generation of SSB signal; envelope detector for demodulation of AM signal and observe diagonal peak	4 hrs per week	Mr. Niteesh Kr. Singh	Lab Assistant	B.Tech. (EE)

			clipping effect; super heterodyne AM receiver and measurement of sensitivity, selectivity and fidelity; frequency modulation using voltage controlled oscillator; detect FM signal using Phase Locked Loop; measure noise figure using a noise generator; study PAM, PWM and PPM; realize PCM signal using ADC and reconstruction using DAC and 4 bit/8bit system and various other setups.				
8.	Electronics Lab	30	Setup to Plot V-I characteristics of junction diode and zener diode; input / output characteristics for common base transistor; R-C coupled common emitter amplifier; R-C Phase shift / Wein Bridge oscillator; study operation IC 555 based astable and mono-stable multi vibrators; application of Operational Amplifier as summer integrator and voltage Comparator; To study operation of Op-Amp based astable and mono-stable multi vibrators and many more experiment setups.	4 hrs per week	Mr. Niteesh Kr. Singh & Mr. Suresh Kr. Maurya	Lab Assistant	B.Tech (EE) & Diploma (EE) respectively
9.	Control System Lab	30	Setup To study and calibrate temperature using resistance temperature detector (RTD); P, PI and PID temperature controller; DC position control system; speed-torque characteristics of an ac servomotor; servo voltage stabilizer; determine response of first order and second order systems for step input for various values of constant 'K' using linear simulator unit and compare theoretical and practical results; study behavior of separately excited dc motor in open loop and closed loop conditions at various loads	4 hrs per week	Mr. Suresh Kr. Maurya	Lab Assistant	Diploma (EE)
10.	EMMI Lab (Electrical Measurement & Measuring Instruments Lab)	30	Setup of Calibration of AC voltmeter and AC ammeter; Maxwell's Bridge; Hay's Bridge; Anderson's Bridge; Owen's Bridge; De Sauty Bridge; Schering Bridge; Kevin's Double bridge; measurement of phase difference and frequency of AC signal using CRO; Measurement of Power using CT & PT; Measurement of iron loss in a ring by using Maxwell's Bridge; To measure high resistance by using loss of charge method.	4 hrs per week	Mr. Sanjay Maurya	Lab Assistant	Diploma (EE)
11.	EI Lab (Electrical Instrumentation Lab)	30	Setup for Measurement of displacement using LVDT; load using strain gauge based load cell; water level using strain gauge based water level transducer; temperature by RTD; Design and Test a signal conditioning circuit for any transducer; Simulate and analyze the frequency domain measurement of electrical signals using spectrum analyzer; Study of PID controllers in flow measurement; Measurement of flow rate by anemometer; Measurement of solar energy using sensor; Implementation of Color Sensor for differentiating frequencies; Determine rotational speed and angle of a motor shaft using	4 hrs per week	Mr. Suresh Kr. Maurya	Lab Assistant	Diploma (EE)

			Encoder; Range finding and object detection using detection sensor; Measurement using various sensors and analyzing the output using LabVIEW software; Design a circuit for noise reduction in measurement system.				
12.	Network Lab	30	Setup for verification of super position theorem; thevenin, norton & max power transfer theorem; Tellegen's theorem; Transient Response of current in R L&RC; Frequency response of current in RLC circuit with AC input; Z&H (DC only) for A network & computation of Y&ABCD parameters; Driving point and transfer function of a two port ladder network and verify theoretical values; Image & characteristic impedance; Frequency response of a twin-T notch filter; Attenuation characteristic of active filter.	4 hrs per week	Mr. Rajmani Verma	Lab Assistant	ITI
13.	Electrical CAD Lab & Advanced Simulation Lab	30	25 Desktop Computer with Licensed Windows and other Academic Licensed Software, Open Source Software, LCD Projector, Printers, CCTV Camera.	8 hrs per week	Mr. Rahul Verma	Lab Assistant	ITI
14.	Fabrication Lab.	30	PCB design machine, soldering equipment, PCB testing kit, Edwinxp software.	4 hrs per week	Mr. Niteesh Kr. Singh & Mr. Suresh Kr. Maurya	Lab Assistant	B.Tech (EE) & Diploma (EE) respectively
15.	Electrical Workshop	30	Study of different electrical system kits, module of electrical wiring, equipment of component testing and circuit design.	4 hrs per week	Mr. Rahul Verma	Lab Assistant	ITI

6.2. Additional facilities created for improving the quality of learning experience in laboratories (25)

Table 6.2: Additional Facility Created for learning experiences

SR. NO.	FACILITY NAME	DETAILS	REASON(S) FOR CREATING FACILITY	UTILIZATION	AREAS IN WHICH STUDENTS ARE EXPECTED TO HAVE ENHANCED LEARNING	RELEVANCE TO PSO
1.	Centre of Excellence in Renewable Energy	The equipment set is used to investigate the design and operation of modern wind power stations with double-fed induction generators. The effect of wind force and the mechanical design of wind power stations can be emulated in realistic detail using the machine testing stand and the	For giving students/Faculty a platform to present their ideas in the field of Renewable Energy	Exact emulation of the technology of the current multi-megawatt wind power generators A fully working and functional training system for wind turbines with double-fed induction generators (DFIG) A wind simulation, which exactly emulates the wind at	Renewable Energy (Solar and Wind)	PSO 1, 2, 3, 4, 5, 9

		software. The control unit for the double-feed asynchronous machine (as a generator for the wind power plant) ensures user-friendly operation and visualization during the experiments. The corresponding Interactive software is designed to convey knowledge and provide interactive support for carrying out the experiments and allows for PC-assisted evaluation of the measured data.		the shaft		
2.	Virtual Lab	01 dedicated PC with Licensed Windows and a dedicated LCD Projector	For giving students a platform to present their ideas and projects of various kind related to electrical and interdisciplinary fields.	As a Lab for various presentation of students	Soft skills, team learning; computing, time management, Apply the knowledge about the electrical engineering and associated fields more effectively in solving electrical engineering problems and to present them effectively.	PSO 1,2,3
3.	Newly purchased software	<ul style="list-style-type: none"> • MATLAB • NI LabVIEW /MultiSim • Proteus • CASPOC • EDWIN XP • D-space 	For skill developments of simulation and circuit design	Active learning and skill development	To develop skills of simulation and circuit design to fill the gaps of academics and industries.	PSO 1, 2, 3, 4, 5, 9

6.3. Laboratories: Maintenance and overall ambience

(10)

Following components & procedures are used/followed for overall maintenance & overall ambience

- Lab Technicians for labs with skills of repair & maintenance.
- Faculty Coordinators for labs are responsible for regular Audits & putting up the lab requirements to HoDs.
- Proper seating with facilities like white board, LCD, Printer, AC etc.
- Documented /online procedure complaints /repair/procurement etc.
- Budget & purchase of consumables & other equipments.

6.4. Project laboratory

Table 6.3: Project Lab Details

S. NO.	FACILITY NAME	FACILITY	UTILIZATION
1.	Electrical Workshop	Project implementation tools like soldering kit, power electronics switches; bread boards etc.	As a Lab for various implementation of small electrical projects and their prototypes.
2.	Renewable Energy Lab.	Prototypes of solar PV, wind power generation, wavect software etc.	For research and development activities.

6.5. Safety measures in laboratories

(10)

Table 6.4: Safety Measures

Name of the Laboratory	Safety measures
All Labs	<ul style="list-style-type: none">• Fire Extinguishers• Auto cut MCBs• UPS to control voltage fluctuations.• Proper Electrical fittings with earthing• Data Backup facility• CCTV cameras• 24 hour power supply• First Aid Box.• Antivirus (Labs having computer)• Safety guide lines for the students

CRITERION 7: Continuous Improvement

Criterion 7	Continuous Improvement	75
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7.1 POs & PSOs Attainment Levels and Actions for improvement-CAY only (30)

POs	Target level	Attainment level	observations
PO1:			
Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.			
PO 1	50 %	72.28 %	Attainment is more than the target level.
Action1: No action is required.			
PO 2:			
Problem Analysis: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	50 %	69.35 %	Attainment is more than the target level.
Action 1: No action is required.			
PO3:			
Design/Development of Solutions: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	50 %	64.69 %	Attainment is more than the target level.
Action 1: No action is required.			
PO4:			
Conduct investigations of complex problems: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	50 %	61.10 %	Attainment is more than the target level.
Action1: No action is required.			
PO5:			
Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	50 %	55.56 %	Attainment is more than the target level.
Action 1: No action is required.			
PO6 :			
The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO 6	50 %	50.97 %	Attainment is more than the target level.
Action 1: No action is required.			
PO7:			
Environment and sustainability: Understand the impact of the professional engineering			

solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO 7	50 %	47.33 %	Attainment is less than the target level.
Action 1: Awareness towards societal and environmental contexts through expert lectures.			
PO8 :			
Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	50 %	39.19 %	Attainment is less than the target level.
Action 1: Communication and more ethical classes to be organized.			
PO9 :			
Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	50 %	42.68 %	Attainment is less than the target level.
Action 1: To develop team spirit through assigning works (Project, Seminar etc.) in groups			
PO 10:			
Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions			
PO 10	50 %	42.80 %	Attainment is less than the target level.
Action1: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations and new learning outcomes.			
PO11:			
Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	50 %	47.65 %	Attainment is less than the target level.
Action 1: To develop managerial and financial skills through assigning Project works in groups			
PO12:			
Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.			
PO 12	50 %	60.14 %	Attainment is more than the target level.
Action 1: No action is required.			
PSO	Target level	Attainment level	observations
PSO1: An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.			
PSO 1	50 %	70.90 %	Attainment is more than the target level.
Action 1: No action is required.			
PSO2: An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.			

PSO2	50 %	59.17 %	Attainment is more than the target level.
Action 1: No action is required.			
PSO3: An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.			
PSO3	50 %	60.30 %	Attainment is more than the target level.
Action 1: No action is required.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (15)

- **360° Feedback:** 360° feedback is being initiated in the University to make it more effective, productive and satisfied in terms of its objectives. Classroom feedback is taken from the students for all the subjects during each semester. Provision of online feedback from all the stake-holders like students, parents, Alumni and Industry/Employers helps us to understand the range of perceptions they have of the University and how the activities being carried out here affect them. This feedback gives a set of rich information wherein the University feels proud of its strengths, plan further development and achieve higher performance more easily.

Academic audit is done at two levels: College Level and Department Level

Objectives of Academic Auditing:

- To ensure academic accountability.
- To define quality of each component of the functionalities and to ensure quality of technical education throughout the system.
- To safeguard functionalities of technical education.
- To define effectiveness of teaching – learning process and to devise methodology to confirm maximum output from faculty members as well as students.

Documents to be produced for Audit:

Each faculty has to maintain the details of various academic activities in the form of documents given below. These documents shall be made available to the auditor as and when required.

- 1) Attendance record;
- 2) Internal marks statement;
- 3) Copies of test question papers;
- 4) Samples of answer sheets;
- 5) Class assignments;
- 6) Samples of PPT slides and other teaching materials;
- 7) List of experiments conducted in laboratories.

College Level:

- Auditing of Academic activities is done through Dean Academic Affairs as per Direction of Director
- Verification of compliance for Lecture Plan, time table, assignments & Tutorial, monthly attendance report etc. is also done.
- Student performance in internal and external exams, placements activities etc. are also audited.
- Adherence to activities defined as per the academic calendar.
- Overall observations are discussed with the concerned HODs for necessary corrective action.

Department Level:

Some of the important methods for academic audits are:

Table 7.1: Academic Audit & Implementations at department Level

S. No.	Academic Audit Tools/Methods	Implementations & Actions
1.	Syllabus Coverage	Audit of <ul style="list-style-type: none">▪ Adherence to lecture plan▪ status of assignment (uploaded & Checked)▪ Status Tutorial & Quizzes▪ Coverage of Lab Experiments▪ Course Files.
2.	Student Performance	Audit of <ul style="list-style-type: none">▪ Performance of students in Internal & External Exams subject wise/Student wise.▪ Performance of students in other curricular and Technical activities.
3.	Attendance monitoring	<ul style="list-style-type: none">▪ Attendance Registers▪ Attendances of students are displayed on notice boards twice a semester.
4.	Academic surveys	<ul style="list-style-type: none">▪ Graduate exit survey,▪ Surveys for PO/PEO mapping,▪ Alumni survey▪ Course End Survey
5.	Lab audits	Audit of <ul style="list-style-type: none">▪ Lab equipment's by lab in-charge▪ Softwares resources▪ Student lab records▪ Overall lab inventory▪ Lab experiments
6.	Student Project Audits	Monitoring system (weekly) for assessment of project progress. <ul style="list-style-type: none">▪ Monthly project presentations.▪ One faculty coordinator for each project group.▪ Regular interaction with guide

After the audit, action taken report is sent to head of the department. Academic audit and actions taken are carried out with the help of different components as explained in the following graph:

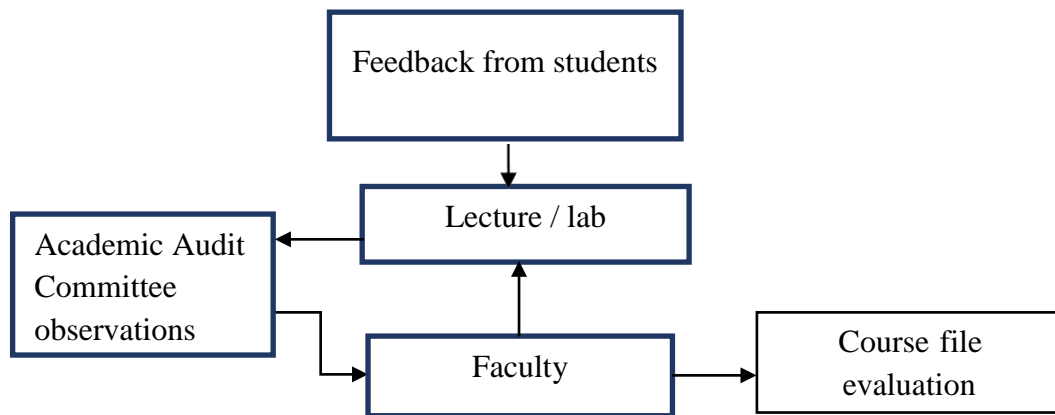


Fig. 7.1: Block Diagram of Academic Audit at Department level

1. Course file evaluation

Course files are prepared by faculty members before the semester starts. The academic committee consisting of HOD, course coordinator and few of departmental senior faculty members performs audit of course files i.e. verify the contents of the course file, lesson plan, assignments, extra material lecture notes, etc. at the end of semester. The comments of the committee are given as feedback to the faculty member to include the recommended material. This audit ensures the quality of education delivered to the students.

2. Lectures/ Lab evaluation

The academic audit committee during their random observation of the lectures/lab check delivery of course material as per the lesson plan, teaching aids used, communication skill and classroom management etc. parameters to ensure the teaching methods as per the standards are being used throughout the institute. Feedback is communicated to the faculty member. The academic audit committee for observation consists of HOD, and few senior faculty members.

Action taken by the faculty members:

Faculty members incorporate changes suggested by the academic committee, if any gaps are found, to ensure quality deliverables.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Table 7.2: Status of Placement, Higher Studies and Entrepreneurship

Items	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
No. of Students Placed in Companies or Government Sector (X)	-	03	23
No. of Students admitted to higher studies with valid qualifying scores (GATE or Equivalent State or National Level Tests, GRE, GMAT, etc.)(Y)	-	01	-
No. of students turned entrepreneur in engineering / technology(Z)	0	0	0

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier institutions
- Entrepreneurs

Improvement in the quality of students admitted to the program (20)

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrance tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

7.4. Improvement in the quality of students admitted to the program (10)

Table 7.3: Admitted Students Quality

Items		CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2019-20)
National Level Entrance Examination(Name of the Entrance Examination)	No. of Students admitted	-	-	-
	Opening Score/Rank	-	-	-
	Closing Score/Rank	-	-	-
State/University/Level Entrance Examination/Others (SEE)	No. of Students admitted	63	65	63
	Opening Score/Rank	104	4212	4852
	Closing Score/Rank	59433	63187	90329
Name of the Entrance Examination for Lateral Entry or Lateral entry details OLET	No. of Students admitted	6	6	12
	Opening Score/Rank	12	98	119
	Closing Score/Rank	235	1031	3974
Average CBSE/Any other Board Result of admitted students(Physics, Chemistry & Mathematics)		-	-	-

CRITERION 8	FIRST YEAR ACADEMICS	50
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8.1 First Year Student-Faculty Ratio (FYSFR) (5)

Table 8.1: Data for first year courses to calculate the FYSFR

Year	Number of students (approved in take strength)	Number of faculty members (considering fractional load)	FYSFR	Assessment= (5×15)/FYSFR (Limited toMax.5)
2019-20	198	10	19.8	3.79
2018-19	189	11	17.18	4.36
2017-18	189	7	27	2.77
Average	192	9.33	21.32	3.64

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Assessment of qualification= $(5x+3y)/RF$, x =Number of Regular Faculty with Ph. D., y =Number of Regular Faculty with Post-graduate qualification RF =Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Table 8.2: Qualification of Faculty Teaching

Year	X (Ph.D.)	Y (M.Tech./M.B.A)	RF	Assessment of faculty qualification (5x+3y)/RF
2019-20	9	1	9	5.33
2018-19	10	1	9	5.88
2017-18	2	1	9	1.44
Average Assessment				4.21

8.3: First Year Academic Performance (10)

Table 8.3: First Year Academic Performance

Academic Performance	CAY	CAYm1	CAYm2
Mean of CGPA (X)	7.0	6.45	7.32
Total no. of successful students (Y) (Without Back)	170	120	97
Total no. of students appeared in examination (Z)	196	183	186
API = X* (Y/Z)	6.07	4.22	3.81
Average API = (AP1+AP2+AP3)/3	4.70		

Academic performance=4.70

8.4: Attainment of Course Outcomes of first year courses

(10)

8.4.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Assessment Process

Direct Assessment Method includes the following:

- **Internal Examination:** Internal examination is conducted twice (per semester). Each paper is of 30 marks. Apart from the two internal examinations, a third mercy examination is also conducted. If a student fails to get the pass percentage with the average score of the two internal examinations, only then he is given the chance to appear in this mercy examination. In addition to the average score obtained by the student, his share of class work and attendance is also included in his internal evaluation marks. Each is of 10 marks. Total of 50 marks are considered for internal examination. In the class work, 3 to 5 assignments and 1-2 quizzes are given by faculty members of their respective subjects to the students.
- **External Examination:** External examination is conducted at the end of the semester and is of 100 marks. Student is evaluated on the basis of 150 marks per subject which includes 100 marks of external examination and 50 marks of internal examination.

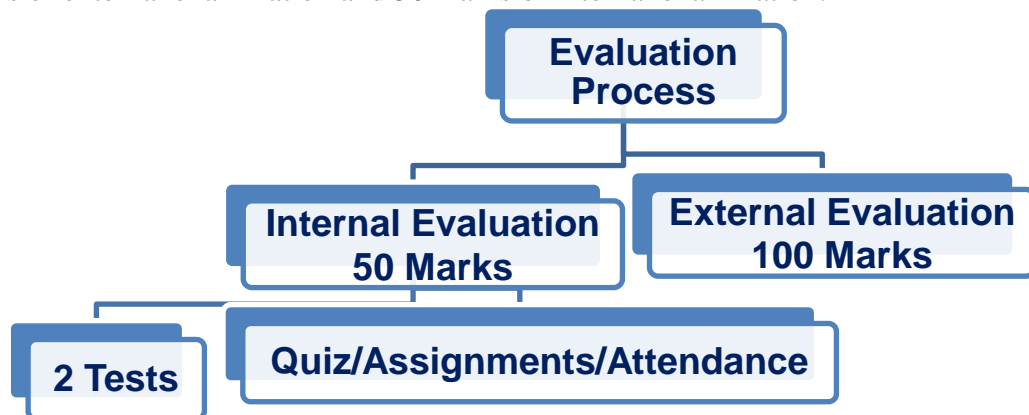


Fig. 8.1: Assessment processes for evaluation of Course Outcomes

Methodology to calculate CO's Attainment

1. Define CO's for a course and check their quality
2. Do mapping of CO with PO's (on a scale of 1, 2 & 3)
3. Align CO's with questions of class tests, assignments and end semester exam
4. Prepare CO alignment sheet and decide Grade scale as follows:

Table 8.4: Grade scale

Marks	Score
$\leq 40\%$	1
$> 40\%$ and $\leq 60\%$	2
$> 60\%$	3

5. Calculate CO's as per table below on the basis of tests, assignments and end semester exams:

Table 8.5: For calculation of CO

S. No.	ROLL NO	STUDENT NAME	CO1				CO2	CO ...
			Total Marks Obtained	Total marks Attempted	≥60%	Score (3,2,1)		
1.	1873720001	Abhinav Bajpai	25	33	75.76	3	Y	
2.	1873720002	Aditya Kumar	18	33	54.55	2	N	
3.	1873720003	Aditya Raj	10	33	30.3	1	N	

6. Prepare faculty course assessment record (FCAR) of each faculty.
7. Align or distribute result of CO attainment (in %) over PO's as per already done CO-PO mapping.

8.4.2. Record the attainment of Course Outcomes of all first-year courses (5)

Table 8.6: COs attainment in percentage of 1st year all subjects

CO Attainment* in percentage					
Subject	CO1	CO2	CO3	CO4	CO5
Engineering Physics (KAS-101)	65.94	65.00	66.88	61.72	-
CO Result	Y	Y	Y	Y	-
Engineering Mathematics 1 (KAS-103)	61.71	66.47	61.71	61.71	61.71
CO Result	Y	Y	Y	Y	Y
Basic Electrical Engineering (KEE-101)	66.13	58.87	62.26	57.90	-
CO Result	Y	Y	Y	Y	-
Chemistry (KAS-202)	70.26	70.71	70.26	71.16	71.16
CO Result	Y	Y	Y	Y	Y
Engineering Mathematics 2 (KAS-203)	74.84	74.84	69.2	74.84	74.84
CO Result	Y	Y	Y	Y	Y
Programming for Problem Solving (KCS-201)	89.213	92.069	90.704	92.069	87.809
CO Result	Y	Y	Y	Y	Y
Professional English (KAS-204)	60.18	60.18	60	56.48	59.64
CO Result	Y	Y	Y	N	N

*Note: CO is attained (Y) if % attainment of that CO is more than 60%.

8.5: Attainment of Program Outcomes from first year courses**(20)****8.5.1. Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)***PO Attainment Procedure:*

1. Do mapping of CO's with PO's (a scale of 1,2 3).
2. If CO attainment is more or equal to 60%, Yes(Y), if less than 60% , No (N).
3. PO attainment is calculated as per PO calculation Table, illustrated below for each subject:

Table 8.7: PO Description

PO's	PO1-PO12 for attainment of POs
	PO Description
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design /development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Project Management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

1. **Course:** Engineering Physics (KAS-101)

Table 8.8: CO Statement of **Engineering Physics (KAS-101)**

CO	Statement
CO1	To solve the classical and wave mechanics problems.
CO2	To develop the understanding of laws of thermodynamics and their application in various processes.
CO3	To formulate and solve the engineering problems on Electromagnetism & Electromagnetic Field Theory.
CO4	To aware of limits of classical Physics & to apply the ideas in solving the problems in their parent streams.

Table 8.9: CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO12
CO1	3	2	2	1	2	2	1	0	0	0	0	0
CO2	3	3	3	2	2	2	2	0	0	0	0	0
CO3	2	2	2	2	3	2	1	0	0	0	1	1
CO4	3	2	2	1	2	2	1	0	0	0	1	0

Table 8.10: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4
% age of CO achieved in Class Test	92.19	89.06	95.31	78.13
% age of CO achieved in End Semester Exam	54.69	54.69	54.69	54.69
Overall Assesment of CO	65.94	65.00	66.88	61.72
CO RESULT	Y	Y	Y	Y

Table 8.11: Results of Attainment of PO's

CO	% AGE STUDENTS ACHIEVED CO	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	65.94	Y	65.94	43.96	43.96	21.98	43.96	43.96	21.98	0	0	0	0	0
CO2	65.00	Y	65.00	65.00	65.00	43.33	43.33	43.33	43.33	0	0	0	0	0
CO3	66.88	Y	44.58	44.58	44.58	44.58	66.88	44.58	22.29	0	0	0	22.29	22.29
CO4	61.72	Y	61.72	41.15	41.15	20.57	41.15	41.15	20.57	0	0	0	20.57	0.00
Average	64.88	Y	59.31	48.67	48.67	32.62	48.83	43.26	27.05	0	0	0	10.72	5.57

2. Course: Engineering Mathematics 1 (KAS-103)**Table 8.12: CO statement of Engineering Mathematics 1 (KAS-103)**

CO	Statement
CO1	Remember the concept of matrices and apply for solving linear simultaneous equations
CO2	Understand the concept of limit, continuity and differentiability and apply in the study of Rolle's, Lagrange,s and Cauchy mean value theorem and Leibnitz theorems.
CO3	Identify the application of partial differentiation and apply for evaluating maxima, minima, series and Jacobians.
CO4	Illustrate the working methods of multiple integral and apply for finding area, volume, centre of mass and centre of gravity.
CO5	Remember the concept of vector and apply for directional derivatives, tangent and normal planes. Also evaluate line, surface and volume integrals.

Table 8.13: CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO12
CO1	3	2	2	1	2	2	1	0	0	0	0	0
CO2	3	3	3	2	2	2	2	0	0	0	0	0
CO3	2	2	2	2	3	2	1	0	0	0	1	1
CO4	3	2	2	1	2	2	1	0	0	0	1	0
CO5	2	1	2	2	2	3	2	0	0	0	1	1

Table 8.14: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4	CO5
% age of CO achieved in Class Test	100	100	90.90	100	100
% age of CO achieved in End Semester Exam	45.31	45.31	45.31	45.31	45.31
Overall Assesment of CO	61.71	61.71	66.47	61.71	61.71
CO RESULT	Y	Y	Y	Y	Y

Table 8.15: Results of Attainment of POs

CO	STUDENT'S ACHIEVE	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	61.71	Y	61.71	41.14	41.14	20.57	41.14	41.14	20.57	0.00	0.00	0.00	0.00	0.00
CO2	61.71	Y	61.71	61.71	61.71	41.14	41.14	41.14	41.14	0.00	0.00	0.00	0.00	0.00
CO3	66.47	Y	44.31	44.31	44.31	44.31	66.47	44.31	22.15	0.00	0.00	0.00	20.57	20.57
CO4	61.71	Y	61.71	41.14	41.14	20.57	41.14	41.14	20.57	0.00	0.00	0.00	22.15	0.00
CO5	61.71	Y	41.14	20.57	41.14	41.14	41.14	61.71	20.57	0.00	0.00	0.00	20.57	20.57
Average	62.55	Y	54.12	41.77	45.89	36.79	46.21	45.89	25.00	0.00	0.00	0.00	12.66	8.22

3. Course: Basic Electrical Engineering (KEE-101)**Table 8.16: CO statement of Basic Electrical Engineering (KEE-101)**

CO	Statement
CO1	Apply the concepts of KVL/KCL and network theorems in solving DC circuits.
CO2	Analyze the steady state behavior of single phase and three phase AC electrical circuits.
CO3	Identify the application areas of a single phase two winding transformer as well as an auto transformer and calculate their efficiency. Also identify the connections of a three-phase transformer.
CO4	Illustrate the working principles of induction motor, synchronous machine as well as DC machine and employ them in different area of applications.

Table 8.17: CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO12
CO1	3	2	2	1	2	2	1	0.00	0.00	0.00	0.00	0.00
CO2	3	3	3	2	2	2	2	0.00	0.00	0.00	0.00	0.00
CO3	2	2	2	2	3	2	1	0.00	0.00	0.00	1	1
CO4	3	2	2	1	2	2	1	0.00	0.00	0.00	1	0.00

Table 8.18: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4
% age of CO achieved in Class Test	88.71	64.52	75.80	61.29
% age of CO achieved in End Semester Exam	56.45	56.45	56.45	56.45
Overall Assesment of CO	66.13	58.87	62.26	57.90
CO RESULT	Y	Y	Y	Y

Table 8.19: Results of Attainment of PO's

CO	% age STUDENTS ACHIEVED CO	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	66.13	Y	66.13	44.09	44.09	22.04	44.09	44.09	22.04	0.00	0.00	0.00	0.00	0.00
CO2	58.87	Y	58.87	58.87	58.87	39.25	39.25	39.25	39.25	0.00	0.00	0.00	0.00	0.00
CO3	62.26	Y	41.50	41.50	41.50	41.50	62.26	41.50	20.75	0.00	0.00	0.00	20.75	20.75
CO4	57.90	Y	57.90	38.60	38.60	19.30	38.60	38.60	19.30	0.00	0.00	0.00	19.30	0.00
Average	61.29	Y	56.10	45.77	45.77	30.52	46.05	40.86	25.34	0.00	0.00	0.00	10.01	5.19

4. Course: Chemistry (KAS-202)**Table 8.20: CO statement of Chemistry (KAS-202)**

COs	Statement
CO1	Use of different analytical instruments.
CO2	Measure molecular/system properties such as surface tension, viscosity, conductance of solution, chloride and iron content in water.
CO3	Measure hardness of water.
CO4	Estimate the rate constant of reaction.
CO5	Explain instrumentation and applications of UV-Visible, Infra Red spectroscopy (IR) and H ¹ NMR spectral techniques.

Table 8.21: CO-PO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	3	3	3	2	3	3	1	3	3	2
CO2	3	2	2	2	3	2	3	2	2	2	2	2
CO3	3	3	2	2	3	2	2	2	1	2	1	2
CO4	3	3	3	2	2	2	1	2	1	2	2	2
CO5	3	2	2	2	2	2	1	2	1	1	1	2

Table 8.22: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4	CO5
% AGE of CO achieved in Class Test	97	98.5	97	100	100
% AGE of CO achieved in End Semester Exam	58.8	58.8	58.8	58.8	58.8
Overall Assesment of CO	70.26	70.71	70.26	71.16	71.16
CO RESULT	Y	Y	Y	Y	Y

Table 8.23: Results of Attainment of PO's

COs	% AGE STUDENTS ACHIEVED CO	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	70.26	Y	70.26	46.84	70.26	70.26	70.26	46.84	70.26	70.26	23.42	70.26	70.26	46.84
CO2	70.71	Y	70.71	47.12	47.12	47.12	70.71	47.12	70.71	47.12	47.12	47.12	47.12	47.12
CO3	70.26	Y	70.26	46.84	70.26	70.26	70.26	46.84	70.26	70.26	23.42	70.26	70.26	46.84
CO4	71.16	Y	71.16	71.16	71.16	47.44	47.44	47.44	23.72	47.44	23.72	47.44	47.44	47.44
CO5	71.16	Y	71.16	71.16	47.44	47.44	47.44	47.44	23.72	47.44	23.72	23.72	23.72	47.44
Average	70.71	Y	70.71	47	56.43	43.904	61.22	51.76	51.734	56.504	28.28	51.76	51.76	51.76

5. Course: Engineering Mathematics 2 (KAS-203)**Table 8.24: CO statement of Engineering Mathematics 2 (KAS-203)**

COs	Statement
CO1	Understand the concept of differentiation and apply for solving differential equations.
CO2	Remember the concept of definite integral and apply for evaluating surface areas and volumes.
CO3	Understand the concept of convergence of sequence and series. Also evaluate Fourier series.
CO4	Illustrate the working methods of complex functions and apply for finding analytic functions.
CO5	Apply the complex functions for finding Taylor's series, Laurent's series and evaluation of definite integrals.

Table 8.25: CO-PO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO12
CO1	3	2	2	1	2	2	1					
CO2	3	3	3	2	2	2	2					
CO3	2	2	2	2	3	2	1				1	1
CO4	3	2	2	1	2	2	1				1	
CO5	2	1	2	2	2	3	2				1	1

Table 8.26: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4	CO5
% AGE of CO achieved in Class Test	100	100	100	100	100
% AGE of CO achieved in End Semester Exam	64.06	64.06	64.06	64.06	64.06
Overall Assesment of CO	74.84	74.84	69.2	74.84	74.84
CO RESULT	Y	Y	Y	Y	Y

Table 8.27: Results of Attainment of PO's

COs	% AGE STUDENTS ACHIEVED	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	74.84	Y	74.84	49.89	49.89	24.94	49.89	49.89	24.94	0.00	0.00	0.00	0.00	0.00
CO2	74.84	Y	74.84	74.84	74.84	49.89	49.89	49.89	49.89	0.00	0.00	0.00	0.00	0.00
CO3	69.20	Y	46.13	46.13	46.13	46.13	69.2	46.13	23.06	0.00	0.00	0.00	24.94	24.94
CO4	74.84	Y	74.84	49.89	49.89	24.94	49.89	49.89	24.94	0.00	0.00	0.00	23.06	0.00
CO5	74.84	Y	49.89	24.94	49.89	49.89	49.89	74.84	24.94	0.00	0.00	0.00	24.94	24.94
Average	73.71	Y	64.11	49.14	54.13	36.79	53.75	54.13	29.56	0.00	0.00	0.00	14.59	9.97

6. Course: Programming for Problem Solving (KCS-201)**Table 8.29: CO statement of Programming for Problem Solving (KCS-201)**

COs	Statement
CO1	Explain the concept of differentiation and apply it for solving differential equation to develop simple algorithms for arithmetic and logical problems.
CO2	To translate the algorithms to programs & execution (in C language)
CO3	To implement conditional branching, iteration and recursion.
CO4	To decompose a problem into functions and synthesize a complete program using divide and conquer approach.
CO5	To use arrays, pointers and structures to develop algorithms and programs.

Table 8.30: CO-PO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	0	2	0	0	0	0	0	0	3	2
CO2	3	0	3	2	0	0	0	0	0	0	3	0
CO3	0	2	2	2	3	0	0	0	0	0	0	2
CO4	0	0	2	0	2	0	0	0	0	0	0	0
CO5	2	2	2	0	2	0	0	0	0	0	2	2

Table 8.31: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4	CO5
% AGE of CO achieved in Class Test	85.93	95.45	90.9	95.45	81.25
% AGE of CO achieved in End Semester Exam	90.62	90.62	90.62	90.62	90.62
Overall Assesment of CO	89.213	92.069	90.704	92.069	87.809
CO RESULT	Y	Y	Y	Y	Y

Table 8.32: Results of Attainment of PO's

COs	% AGE STUDENTS ACHIEVED CO	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	67.92	Y	85.93	57.28	0	57.28	0	0	0	0	0	0	0	0
CO2	65.10	Y	95.45	0	95.45	63.63	0	0	0	0	0	0	0	0
CO3	62.26	Y	0	60.60	60.60	60.6	90.9	0	0	0	0	0	0	0
CO4	53.77	N	0	0	63.63	0	63.63	0	0	0	0	0	0	0
CO5	49.81	N	54.16	54.16	54.16	0	54.16	0	0	0	0	0	0	0
Average	59.77	Y	78.52	57.35	68.46	60.51	69.57	0	0	0	0	0	0	0

7. Course: Professional English (KAS-204)

Table 8.33: CO statement of Professional English (KAS-204)

COs	Statement
CO1	Students will be enabled to understand the basic objective of the course by being acquainted with specific dimensions of communication skills i.e. Reading, Writing, Listening, Thinking and Speaking.
CO2	Students would be able to create substantial base by the formation of strong professional vocabulary for its application at different platforms and through numerous modes as Comprehension, reading, writing and speaking etc.
CO3	Students will apply it at their workplace for writing purposes such as Presentation/official drafting/administrative communication and use it for document/project/report/research paper writing.
CO4	Students will be made to evaluate the correct & error-free writing by being well-versed in rules of English grammar & cultivate relevant technical style of communication & presentation at their work place & also for academic uses.
CO5	Students will apply it for practical and oral presentation purposes by being honed up in presentation skills and voice-dynamics. They will apply techniques for developing inter-personal communication skills and positive attitude leading to their professional competence.

Table 8.34: CO-PO Mapping

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO 11	PO12
CO1	3	2	2	1	2	2	1	0	0	0	0	0
CO2	3	3	3	2	2	2	2	0	0	0	0	0
CO3	2	2	2	2	3	2	1	0	0	1	1	2
CO4	3	2	2	1	2	2	1	0	0	0	1	0
CO5	2	1	2	2	2	3	2	0	0	1	1	2

Table 8.35: Result of Attainment of CO's

CO	CO1	CO2	CO3	CO4	CO5
% AGE of CO achieved in Class Test	98.24	98.24	85.96	77.19	96.49
% AGE of CO achieved in End Semester Exam	43.85	43.85	43.85	43.85	43.85
Overall Assesment of CO	60.18	60.18	60	56.48	59.64
CO RESULT	Y	Y	Y	N	N

Table 8.36: Results of Attainment of PO's

COs	% AGE STUDENTS ACHIEVED CO	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	60.18	Y	60.18	40.12	40.12	20.06	40.12	40.12	20.06	0	0	0	0	0
CO2	60.18	Y	60.18	60.18	60.18	40.12	40.12	40.12	40.12	0	0	0	0	0
CO3	60.00	Y	40	40	40	40	60	40	20	0	0	20	20	40
CO4	56.48	N	0	0	0	0	0	0	0	0	0	0	0	0
CO5	59.64	N	0	0	0	0	0	0	0	0	0	0	0	0
Average	59.29	Y	53.45	46.76	46.76	33.39	46.74	40.08	26.72	0	0	20	20	40

Table 8.37: Ist YEAR PO's Attainment

I st YEAR PO's Attainment													
Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
Engineering Physics (KAS-101)	59.31	48.67	48.67	32.62	48.83	43.26	27.05	0	0	0	10.72	5.57	
Engineering Mathematics 1 (KAS-103)	54.12	41.77	45.89	36.79	46.21	45.89	25.00	0	0	0	12.66	8.22	
Basic Electrical Engineering (KEE-101)	56.10	45.77	45.77	30.52	46.05	40.86	25.34	0	0	0	10.01	5.19	
Chemistry (KAS-202)	70.71	47	56.43	43.904	61.22	51.76	51.734	56.504	28.28	51.76	51.76	51.76	
Engineering Mathematics 2 (KAS-203)	64.11	49.14	54.13	36.79	53.75	54.13	29.56	0	0	0	14.59	9.97	
Programming for problem solving (KCS-201)	78.52	57.35	68.46	60.51	69.57	0	0	0	0	0	0	0	
Professional English (KAS-204)	53.45	46.76	46.76	33.39	46.74	40.08	26.72	0	0	20	20	40	
Average	62.33	48.06	52.30	39.21	53.19	39.42	26.48	8.07	4.04	10.25	17.10	17.24	

Table 8.38: Summary of 1st YEAR PO Attainment

Summary of 1 st YEAR PO Attainment												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Target Level %	50	50	50	50	50	50	50	50	50	50	50	50
Average % attainment of a I Yr courses	62.33	48.06	52.30	39.21	53.19	39.42	26.48	8.07	4.04	10.25	17.10	17.24
Attained, Y/N	Y	N	Y	N	Y	N	N	N	N	N	N	N

8.5.2. Actions taken based on the results of evaluation of relevant POs and PSOs (10)

Target set was 50% for all PO's of B.Tech. first year academics in consultation with faculty members & Dean Faculty (Engineering & Technology).

Table 8.39: Results of evaluation of relevant POs and PSOs

Po's	Target level	Attainment level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	50%	62.33%	Target value is more than attainment level
Action: No action needed.			
PO2			
Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	50%	48.06%	Target value is less than attainment level
Action: Students learning is enhanced by providing complex numerical problems in the field of science and engineering.			
PO3			
Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	50%	52.30%	Target value is equal to attainment level
Action: No action needed.			
PO4			
Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	50%	39.21%	Target value is less than attainment level
Action: -- Faculty was instructed: 1. To make familiarise students for interpretation of data using latest research method. 2. To follow experimentation standard procedure and error is calculated foreach. 3. Visit of R&D laboratories were planned.			
PO5			
Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	50%	53.19%	Target value is less than attainment level

Action: No action needed.			
PO6			
The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO 6	50%	39.42%	Target value is less than attainment level
Action: Several activities were planned for students. The students to participate/ conduct technical events, other events where their basic knowledge should convert to the application matching with professional engineering practice.			
PO7			
Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO 7	50%	26.48%	Target value is less than attainment level
Action1: Student learning to be enhanced by increased use of books related to environmental contexts.			
Action 2: Students were told to do innovation for its usefulness to society. They are required to work on projects from first rear.			
PO8			
Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	50%	8.07%	Target value is less than attainment level
Action: Faculty/ experts to familiarize about plagiarism and copyright rules.			
PO9			
Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	50%	4.04%	Target value is less than attainment level
Action: Students to be motivated to organize and participate in quiz contest and group participation in events. Motivate to do teamwork in projects.			
PO 10			
Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	50%	10.25%	Target value is less than attainment level
Action: Student to do more practice for enhancing communication skill by organizing special coaching classes/ lecture from HR personnel.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	50%	17.10%	Target value is less than attainment level
Action: Faculty to conduct exercises / group activity regarding the management principles and managing projects.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO 12	50%	17.24%	Target value is less than attainment level
Action: To provide training of students in yoga and sports			

CRITERIA 9	STUDENT SUPPORT SYSTEM	50
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9. STUDENT SUPPORT SYSTEM (50)

9.1 Mentoring system to help at individual level (5)

The institute provides student support and mentoring system at department as well as institute level. At department level each year has one mentor or class coordinator who can help the students by discussing the issues (academics and personal) related to them. Class coordinator is also act as a counselor for the same year students.

The coordinators of Electrical Engineering Department for various batches are as follows:

Table 9.1: List of coordinators in Electrical Engineering

Sr. No.	Name of Course	Coordinator/mentor
1.	B. Tech. First Year	Dr. Amit Kumar Pandey
2.	B. Tech. Second Year	Dr. Arif Iqbal
3.	B. Tech. Third Year	Mr. Lokesh Kumar Yadav
4.	B.Tech. Fourth Year	Mr. Sonu Kumar

At college level mentoring of the students is done by different offices of college i.e., office of Director of institution, Dean Student welfare (DSW), Training and placement cell, Student counselor at department level. Following are some points of mentoring:

Career Guidance:

- To help students to check out academic and career roadmaps for themselves.
- To create awareness among the students about emerging professional trends and entrepreneurship and market needs etc.
- To provide guidance to the students on various options available for higher studies available in India and abroad.
- To help the students in the development of their strengths, sharpening their interests planning for a satisfying future.
- To provide guidance for personality development, positive attitude and inter-personal skills.
- To promote Value System and National Integration among students.

Pre-Placement Courses:

- Strengthen Industry-Institute Interaction.
- To prepare a comprehensive list of industries.
- To visit industries frequently to explore possibilities of student's recruitment through campus interviews
- To prepare list of students along with bio-data eligible for various interviews.
- To conduct workshops/programs for students in areas like personality development, communication skills
- To help students to get vocational training in industries during vacation.
- To make facilities available for the smooth conduct of interviews by visiting industry personnel.

9.2 Feedback analysis and reward /corrective measures taken, if any (10)

The college is proactive for continuous improvement. To achieve this, it follows a 360° feedback system from Students, Alumni Parents, Peer group and Industry. Student Feedback is very important factor. For time being Offline Feedback system is available and students are asked to give their confidential feedback for theory as well as practical subjects taught to them at the end of the semester. The feedback of alumni Parents, Peer group and industry person is also recorded time to time to improve the methodology of teaching and learning.

9.3 Feedback on facilities (5)

The feedback of the students is not limited to the scope of improving teaching learning process. It also involves taking feedback of students for the laboratories for up gradation of software, Internet facilities, Library resources etc. An exit survey is conducted for final year students (a copy of questionnaire attached) to gather their feedback for the various facilities provided to them in their four-year program. These changes are then genuinely incorporated.

9.4. Self-learning (5)

- Students are encouraged for Self-Learning program through MOOCS (Massive Open Online Course)
- The college has access to various e-books, journals and magazines which are available in the Institute Library to help students to explore and read about their areas of interest.
- In addition, there is an access of high speed Internet in each hostel which helps them to be tech savvy and moreover a free thinker.
- This helps student to come up with new ideas and new techniques.
- Faculty from time to time change adopt new ways in the course to enhance self-learning such as:
 - Presentation of seminars
 - Industrial Training
 - Projects
 - Assignments
 - Dissertation in some courses are compulsory as a part of their course requirements.

In addition, these practices are highly encouraged to make learning more student-centric. Performance in these activities gives an excellent opportunity to students to improve upon their knowledge level.

Technical fests, contests, debates, etc. are arranged and organized mostly by the students themselves so that student-cantered learning exercises are developed both at the department and institute level. This improves the qualities such as leadership, decision making, self-learning from experience.

MOOC Courses

The University has incorporated MOOCs courses in its curriculum from the session January 2018 onwards to promote Self Learning. These are online courses run on an IT platform known as SWAYAM& SWAYAM PRABHA, an initiative taken by Govt. of India.

College Library

The Knowledge Centre (Central Library) at the Rajkiya Engineering College (REC), Ambedkar Nagar, is a Resource Centre for academic and research activities in the areas of Engineering Teaching and Literatures in English language. The Central Library has been built to International Standards. It spread over to an area of 4500 sq. m. with ground plus three floors. The library is equipped with a Reference Section with a seating capacity 100 students, Cyber Library (Digital Library) Room, Audio Visual Section, Journal Section, Newspaper and Magazine Section, Conference Room, Research Scholar Section. It has numerous

specialized collections of Books, Journals, NDL, ASME (*American Society of Mechanical Engineers*), ASTM (The American Society Of Mechanical Engineers), IEEE-ASPP (Institute of Electrical and Electronics Engineers - All Society Periodicals Package), Springer, Gate Engineering, and McGraw Hill (Nalanda E-Consortium –AKTU e-consortium Project). The library is fully computerized system which enables the students to search the required books they specifying the author, title, subject and keywords. It facilitates the users to reserve the books they need, and also updates on the status of a particular book and that of the User. The state-of-the library is the heart of engineering institute’s teaching, learning and research activities with access to most of the referred databases of the world. The fully-automated library is powered by LibSys / Koha and Dspace library software and has the facility to access e-resources 24x7 within and in the campus. The library has been actively conducting National Digital Library of India (NDL) and NPTEL Video courses for students every evening.

A well-equipped library, having an area of 2287.5m² (carpet area inclusive of ground floor, first floor and second floor) and ground area about 762.5m², number of titles available is 386 and 8384 number of volumes available. The capacity of library is 125 students. The library provides open access to students and faculty for search of reading material and the library services are computerized besides Internet and reprographic facilities. The Library has been computerised for circulation and search of books with Libsis Software. The Cyber room of Library has 25 Computers for open access of e-resources.

9.5 Career Guidance, Training, Placement (10)

In order to meet the counseling needs of engineers, the college has a separate Career & counseling cell which provides counseling to students in areas like stress management, positive thinking, preparation for various competitive exams and general guidance regarding career. The college runs regular communication skills programs in all the undergraduate courses. The course is designed to provide expertise in written language. Language lab is functional for developing the soft skills among students.

Students Counselors:

Table 9.2: List of Faculty Counselor in Electrical Engineering

Civil Engineering First Year	Dr. Ayush Mittal
Information Technology First Year	Dr. Ashish Kumar Mishra
Electrical Engineering First Year	Dr. Puneet Joshi

TPO Cell of College:

Table 9.3: TPO Cell of College

Training and placement officer (TPO)	Mr. Shivendra Pandey
Departmental TPO:	
Civil Engineering	Mr. Avaneesh Kumar Yadav
Electrical Engineering	Mr. Sonu Kumar
Information Technology	Mr. Amit Kumar

Objective of career and counseling cell are as follows:

- To create awareness among the students about entrepreneurship and emerging professional trends and market needs etc.
- To provide guidance to the students on various available options for higher studies in India and abroad.
- To help the students in the development of their strengths, sharpening their interests planning for a satisfying future.
- To provide guidance for personality development, positive attitude and inter-personal skills.
- To promote Value System and National Integration among students.

Placement record:**Table 9.4 A. Placement record in Session 2019-20**

S. No.	Company Name	Selected Students
1.	GATE Qualified	35
2.	Pinncledia Tech.	5
3.	Acezd	2
4.	Pie Infocomm Pvt. Limited	5
5.	TCS	1
6.	CEDCOSS Technology Pvt. Limited	1
7.	BYJU's	2
8.	Allin Call Research and Solutions Pvt. Limited	1
Grand Total		52

Table 9.4 B. Students admitted for Higher Education in Session 2019-20

S. No.	Name of Student	Name of Branch	Name of Institute	Course
01.	Akash Deep Arya	Power Electronics	IIT BHU (Varanasi)	M.Tech.
02.	Sumit Rawat	Environmental Engg.	NIT, Kurushetra	M.Tech.
03.	Neeraj Kumar	Environment Engg.	MMMUT, Gorakhpur	M.Tech.
04.	Anjali	Computer Science & Engg.	Indian Institute of Information Technology, Pune	M.Tech.
05.	Rajat Kumar	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.
06.	Dharmendra Bharti	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.

07.	Rohit Kumar	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.
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Table 9.5 Placement record in Session 2018-19

S.No.	Company Name	Selected Students
1.	GATE Qualified	27
2.	Textron Technologies Pvt. Ltd	15
3.	Vidya Enterprises	10
4.	Neptune Infra solution	02
5.	Raj Construction	25
6.	CEDCOSS Technology Pvt. Ltd.	04
7.	Cognizant	01
8.	NIIT	02
9.	Micro Focus	02
10.	Sonus Networks India	02
Grand Total		90

Table 9.6 Placement record in Session 2017-18

S. No.	Company Name	Selected Students
1.	GATE Qualified	37
2.	Wipro Technology	02
3.	CEDCOSS Technology Pvt. Ltd.	02
4.	TCS	03
5.	Applicate Innovation Simplify	01
Grand Total		45

9.6. Entrepreneurship/ Start-Up Cell : Parikalpana

Start-Up Cell was established under the Technical Education Quality Improvement Programme, Phase-III (TEQIP-III) (as per the Start-up policy launched by AICTE on 16th November 2016). The cell with its team of chairman, coordinators, faculty members and E-cell student volunteers of the institute is meant for nurturing the potential start-up ideas that will cater need of both tech and non-tech solution to various social, economic and industrial problems of the nation.

With a vision to cultivate the young innovators studying in Rajkiya Engineering College Ambedkar Nagar, we established a Start-Up Cell in 2019 supported by TEQIP-III and together we call Parikalpana. Our plan is to create a facility in Rajkiya Engineering College Ambedkar Nagar, where students of any branches can avail softwares to have a simulation experiment to realize their innovative ideas.

9.7. Co-curricular and Extra-Curricular Activities (10)

(The College may specify the co-curricular and extra-curricular activities) (Quantify activities such as NCC, NSS etc.) Apart from the academic, co-curricular and extracurricular activities, students are also take part in various fest coordinated and conducted by themselves under the able guidance of institute and faculty.

Table 9.7: Extra-Curricular Activities (On-line Mode) in Session 2020-21 (upto December 2020)

Sr. No.	Activity	Date
1.	Students Excellence & Learning Program by Art of Living	August 04-09, 2020
2.	Webinar on "Electrical Vehicle Development Using Ansys Multiphysics"	August 17, 2020
3.	International E-conference on "Effect of COVID-19 Pandemic on Agriculture & Allied Sciences- (ECPAAS-2020)"	August 23-24, 2020
4.	Hackathon Competition	September 15, 2020
5.	Plantation and cleanliness under Swachh Bharat Campaign	October 01, 2020
6.	Celebration of Gandhi Jayanti	October 02, 2020
7.	Public Movement Campaign on COVID-19	October 08, 2020
8.	Painting, Sketching, Slogan Writing and Essay Competition on Birthday Celebration of former President Dr. A.P.J. Abdul Kalam	October 15, 2020
9.	Online debate, Understanding of POSCO ACT, Poster on Child Marriage Prevention under Women Empowerment Program	October 17-25, 2020
10.	Celebration of National Unity Day on Birthday of Sardar Vallabh Bhai Patel and Valmiki Jayanti	October 31, 2020
11.	A webinar on ICT for Student & Teachers in collaboration with YMCA Faridabad under Twinning Activity	November 02, 2020
12.	Workshop on **Emerging Trends in Civil Engineering Impacting the Construction Industry	November 03-07, 2020
13.	Celebration of Community Unity Week	November 19-25, 2020

14.	Celebration of Constitution Day	November 26, 2020
15.	Quiz Competition on International Human Rights Day	December 10, 2020
16.	Online FDP on Power System Optimization and Control	December 14-18, 2020
17.	National Mathematics Day	December 22, 2020

Table 9.8 A : Extra-Curricular Activities (On-line Mode) in Session 2019-20

A. MOOCS/NPTEL Courses completed by students:

A- NPTEL STUDENTS				
S. No	Student Name	Subject	Percentage	Year
1.	Manvendra Singh	1. Problem Solving Through Programming In C	65%	Jan-Apr 2019 (12 Week Course)
		2. Joy of Computing Using Python	65%	Jan-Apr 2019 (12 Week Course)
2.	Aakash Singh	1. Programming, Data Structures and Algorithms Using Python	70%	Jan-Mar 2019 (8 Week Course)
		2. Problem Solving Through Programming In C	85%	Jan-Apr 2019 (12 Week Course)
		3. Joy of Computing Using Python	84%	Jan-Apr 2019 (12 Week Course)
3.	Prashant Kumar	Introduction to Automata, Languages and Computation	52%	Jan-Apr 2019 (12 Week Course)
4.	Akash Kumar Maurya	Machine Learning for Engineering and Science Applications	50%	Jan-Apr 2019 (12 Week Course)
5.	Ankush Pandey	Machine Learning for Engineering and Science Applications	62%	Jan-Apr 2019 (12 Week Course)
6.	Rohit Kumar	1. Machine Learning for Engineering and Science Applications	49%	Jan-Apr 2019 (12 Week Course)
		2. Joy of Computing Using Python	59%	Jan-Apr 2019 (12 Week Course)
7.	Amrendra Pratap Singh	1. Introduction to Automata, Languages and Computation	87%	Jan-Apr 2019 (12 Week Course)
		2. Discrete Mathematics	86%	Jan-Apr 2019 (12 Week Course)
		3. Joy of Computing Using Python	68%	Jan-Apr 2019 (12 Week Course)
8.	Manthan Bhagtani	Programming, Data Structures and Algorithms Using Python	57%	Jan-Mar 2019 (8 Week Course)
9.	Mohit Chaudhari	Plastic Waste Management	73%	Feb-Apr 2019 (8 Week Course)
10.	Saurav Singh	Digital Land Surveying and Mapping (DLS & M)	58%	Feb-Apr 2019 (8 Week Course)
11.	Ashish Kumar Saroj	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
12.	Rohit Singh	Programming, Data Structures and Algorithms Using Python	55%	Jan-Mar 2019 (8 Week Course)

13.	Akash Deep Arya	ELECTRICAL MACHINES - II	63%	Jan-Apr 2019 (12 Week Course)
14.	Vikas Patel	Introduction to Automata, Languages and Computation	55%	Jan-Apr 2019 (12 Week Course)
15.	Rahul Kumar	Introduction to Automata, Languages and Computation	58%	Jan-Apr 2019 (12 Week Course)
16.	Akash Raj	Introduction to Automata, Languages and Computation	67%	Jan-Apr 2019 (12 Week Course)
17.	Sarika Yadav	Introduction to Automata, Languages and Computation	57%	Jan-Apr 2019 (12 Week Course)
18.	Ritesh Kushwaha	Introduction to Automata, Languages and Computation	60%	Jan-Apr 2019 (12 Week Course)
19.	Sarvesh Kumar Maury	Introduction to Automata, Languages and Computation	55%	Jan-Apr 2019 (12 Week Course)
20.	Nikku Verma	Introduction to Automata, Languages and Computation	83%	Jan-Apr 2019 (12 Week Course)
21.	Dipmala Kumari	Introduction to Automata, Languages and Computation	48%	Jan-Apr 2019 (12 Week Course)
22.	Rashmi Shukla	Introduction to Automata, Languages and Computation	58%	Jan-Apr 2019 (12 Week Course)
23.	Harsh Vardhan	Introduction to Automata, Languages and Computation	54%	Jan-Apr 2019 (12 Week Course)
24.	Tushar Tomar	Introduction to Automata, Languages and Computation	92%	Jan-Apr 2019 (12 Week Course)
25.	Suryank Saroj	Introduction to Automata, Languages and Computation	54%	Jan-Apr 2019 (12 Week Course)
26.	Satyam Gupta	1. Joy of Computing Using Python	82%	Jan-Apr 2019 (12 Week Course)
		2. Data Mining	66%	Feb-Apr 2019 (8week Course)
27.	Anubhav Bharti	Problem Solving Through Programming In C	58%	Jan-Apr 2019 (12 Week Course)
28.	Rohit Kumar	Soil Mechanics / Geotechnical Engineering I	41%	Jan-Apr 2019 (12 Week Course)
29.	Rishabh Dev Tripathi	Digital Land Surveying and Mapping (DLS & M)	40%	Feb-Apr 2019 (8 Week Course)
30.	Anubhav Gupta	Problem Solving Through Programming In C	51%	Jan-Apr 2019 (12 Week Course)
31.	Nanci Salonia	1. Enhancing Soft Skills and Personality	67%	Feb-Apr 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	60%	Aug-Oct 2019 (8 Week Course)
32.	Ashutosh Singh	Problem Solving Through Programming In C	53%	Jan-Apr 2019 (12 Week Course)
33.	Pankaj	1. Joy of Computing Using Python	85%	Jan-Apr 2019 (12 Week Course)
		2. Data Mining	64%	Feb-Apr 2019 (8 Week Course)
34.	Vipin Kumar Sahu	1. Data Mining	68%	Feb-Apr 2019 (8 Week Course)
		2. Joy of Computing Using Python	85%	Jan-Apr 2019 (12 Week Course)

35.	Shivam Verma	Soil Mechanics / Geotechnical Engineering I	50%	Jan-Apr 2019 (12 Week Course)
36.	Sumit Kumar Singh	Principles of Signals and Systems	42%	Jan-Apr 2019 (12 Week Course)
37.	Rajverdhan Verma	Principles of Signals and Systems	60%	Jan-Apr 2019 (12 Week Course)
38.	Aman Kumar	Soil Mechanics / Geotechnical Engineering I	73%	Jan-Apr 2019 (12 Week Course)
39.	Rohit Kumar	Soil Mechanics / Geotechnical Engineering I	48%	Jan-Apr 2019 (12 Week Course)
40.	Harshit Yadav	Problem Solving Through Programming In C	72%	Jan-Apr 2019 (12 Week Course)
41.	Shalini Keshri	Principles of Signals and Systems	45%	Jan-Apr 2019 (12 Week Course)
42.	Abhinav Bajpai	Principles of Signals and Systems	51%	Jan-Apr 2019 (12 Week Course)
43.	Samant Srivastava	Principles of Signals and Systems	77%	Jan-Apr 2019 (12 Week Course)
44.	Shailendra Singh	Principles of Signals and Systems	66%	Jan-Apr 2019 (12 Week Course)
45.	Rohit Singh	Principles of Signals and Systems	85%	Jan-Apr 2019 (12 Week Course)
46.	Vishal	Soil Mechanics / Geotechnical Engineering I	60%	Jan-Apr 2019 (12 Week Course)
47.	Vartika Singh	Introduction to Automata, Languages and Computation	65%	Jan-Apr 2019 (12 Week Course)
48.	Dipmala Kumari	Introduction to Automata, Languages and Computation	48%	Jan-Apr 2019 (12 Week Course)
49.	Anju Lata Sen	Introduction to Automata, Languages and Computation	57%	Jan-Apr 2019 (12 Week Course)
50.	Rajarshi Singh	Introduction to Automata, Languages and Computation	71%	Jan-Apr 2019 (12 Week Course)
51.	Abhijeet Verma	Problem Solving Through Programming In C	68%	Jan-Apr 2019 (12 Week Course)
52.	Raj Mani	Problem Solving Through Programming In C	46%	Jan-Apr 2019 (12 Week Course)
53.	Anshuman Singh	Problem Solving Through Programming In C	52%	Jan-Apr 2019 (12 Week Course)
54.	Divyanshu Verma	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
55.	Rajnesh Kumar	Electrical Machines-II	40%	Jan-Apr 2019 (12 Week Course)
56.	Akash Kumar Dwivedi	Engineering Mathematics-I	68%	Jan-Apr 2019 (12 Week Course)
57.	Shivam Vishwakarma	Engineering Mathematics-I	55%	Jan-Apr 2019 (12 Week Course)
58.	Abhishek Pandey	Electric Vehicles – Part 1	46%	Feb-Mar 2019 (4 Week Course)
59.	Gaurav Vishesh	Principles of Signals and Systems	56%	Jan-Apr 2019 (12 Week Course)
60.	Rajarshi Singh	Principles of Signals and Systems	48%	Jan-Apr 2019 (12 Week Course)

61.	Kavita	Principles of Signals and Systems	46%	Jan-Apr 2019 (12 Week Course)
62.	Keerti Soni	Enhancing Soft Skills and Personality	72%	Feb-Apr 2019 (8 Week Course)
63.	Sadhana Kumari	Enhancing Soft Skills and Personality	58%	Feb-Apr 2019 (8 Week Course)
64.	Aditya Kumar	Enhancing Soft Skills and Personality	82%	Feb-Apr 2019 (8 Week Course)
65.	Kumari Anjali Singh	Introduction to Smart Grid	51%	Jul-Sep 2019 (8 Week Course)
66.	Manthan Bhagtani	Data Base Management System	69%	Jul-Sep 2019 (8 Week Course)
67.	Shikha Srivastava	Data Base Management System	66%	Jul-Sep 2019 (8 Week Course)
68.	Harsh Vardhan	Data Base Management System	54%	Jul-Sep 2019 (8 Week Course)
69.	Prateek Nayak	Data Base Management System	86%	Jul-Sep 2019 (8 Week Course)
70.	Nikku Verma	Data Base Management System	78%	Jul-Sep 2019 (8 Week Course)
71.	Ritesh Kushwaha	Data Base Management System	72%	Jul-Sep 2019 (8 Week Course)
72.	Rashmi Shukla	Data Base Management System	66%	Jul-Sep 2019 (8 Week Course)
73.	Vishal Jaiswal	Data Base Management System	92%	Jul-Sep 2019 (8 Week Course)
74.	Virendea Singh Bohra	Data Base Management System	80%	Jul-Sep 2019 (8 Week Course)
75.	Pankaj Gangwar	ELECTRICAL MACHINES - II	58%	Jan-Apr 2019 (12 Week Course)
76.	Prince Kumar Singh	Fluid Mechanics	50%	Aug-Oct 2019 (8 Week Course)
77.	Jitendra Gond	Remote Sensing and Digital Image Processing of Satellite Data	59%	Aug-Oct 2019 (8 Week Course)
78.	Pankaj Kushwaha	Scheduling Techniques in Projects	62%	Aug-Sep 2019 (4 Week Course)
79.	Saurav Singh	Scheduling Techniques in Projects	62%	Aug-Sep 2019 (4 Week Course)
80.	Mohit Chaudhari	Remote Sensing and Digital Image Processing of Satellite Data	68%	Aug-Oct 2019 (8 Week Course)
81.	Rohit Yadav	Fluid Mechanics	50%	Aug-Oct 2019 (8 Week Course)
82.	Nityanand Kushwaha	Remote Sensing and Digital Image Processing of Satellite Data	68%	Aug-Oct 2019 (8 Week Course)
83.	Anurag Gautam	Integrated Waste Management for a Smart City	69%	Jul-Oct 2019 (12 Week Course)
84.	Shivam Vishwakarma	Problem Solving Through Programming In C	54%	Jul-Oct 2019 (12 Week Course)
85.	Suraj Prasad	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
86.	Sawan Kanaujiya	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)

87.	Rumi Singh	Developing Soft Skills and Personality	68%	Aug-Oct 2019 (8 Week Course)
88.	Raj Singh	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
89.	Deepak Kumar	1. Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
		2. Patent Law Engineers and Scientists	51%	Jul-Oct 2019 (12 Week Course)
90.	Ankit Kumar Gautam	Developing Soft Skills and Personality	67%	Aug-Oct 2019 (8 Week Course)
91.	Ankesh Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
92.	Sarvesh	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
93.	Satendra Gangwar	Developing Soft Skills and Personality	66%	Aug-Oct 2019 (8 Week Course)
94.	Aditya Kumar	Developing Soft Skills and Personality	63%	Aug-Oct 2019 (8 Week Course)
95.	Anand Kumar Balmiki	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
96.	Priya Kanaujiya	Developing Soft Skills and Personality	88%	Aug-Oct 2019 (8 Week Course)
97.	Satyendra Kumar Bhardwaj	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
98.	Suraj Kumar	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
99.	Akash Rawat	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
100.	Utkarsh Verma	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
101.	Sadhana Kumari	Developing Soft Skills and Personality	63%	Aug-Oct 2019 (8 Week Course)
102.	Shivangi Shah	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
103.	Pranjal Pandey	Developing Soft Skills and Personality	97%	Aug-Oct 2019 (8 Week Course)
104.	Girijesh Kumar Gond	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
105.	Pratik Kumar Gautam	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
106.	Ankit Kumar	Developing Soft Skills and Personality	65%	Aug-Oct 2019 (8 Week Course)
107.	Pawan Kumar	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
108.	Avinash Kumar	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
109.	Aditya Kumar	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
110.	Abhishek Mishra	1. Developing Soft Skills and Personality	84%	Aug-Oct 2019 (8 Week Course)
		2. Problem Solving Through	61%	Jul-Oct 2019 (12 Week

		Programming in C		Course)
111.	Pramod Gupta	1. Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
		2. Problem Solving Through Programming in C	56%	Jul-Oct 2019 (12 Week Course)
112.	Deepika Mourya	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
113.	Priyanka Singh	Cloud Computing	47%	Aug-Oct 2019 (8 Week Course)
114.	Shivendera Kumar Nayak	Developing Soft Skills and Personality	61%	Aug-Oct 2019 (8 Week Course)
115.	Jayendra Pratap	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
116.	Nidhi Pal	Data Base Management System	56%	Jul-Sep 2019 (8 Week Course)
117.	Anuj Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
118.	Shivam Vishwakarma	Developing Soft Skills and Personality	77%	Aug-Oct 2019 (8 Week Course)
119.	Vivek Kumar	1. Fluid Mechanics	75%	Aug-Oct 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
120.	Sooraj Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
121.	Vaibhav Kumar	1. Developing Soft Skills and Personality	83%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	64%	Aug-Oct 2019 (8 Week Course)
122.	Akhilesh Singh	1. Developing Soft Skills and Personality	69%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	61%	Aug-Oct 2019 (8 Week Course)
123.	Rohit Kumar	1. Developing Soft Skills and Personality	81%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	69%	Aug-Oct 2019 (8 Week Course)
124.	Narendra Kumar Yadav	1. Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	75%	Aug-Oct 2019 (8 Week Course)
125.	Juli Varun	Developing Soft Skills and Personality	65%	Aug-Oct 2019 (8 Week Course)
126.	Jahnvi Divyam	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
127.	Abhishek Kumar Gautam	1. Fluid Mechanics	53%	Aug-Oct 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	79%	Aug-Oct 2019 (8 Week Course)
128.	Sonam Sahni	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
129.	Ranjana Yadav	Problem Solving Through	56%	Jan-Apr 2019 (12 Week

		Programming In C		Course)
130.	Aakash Yadav	Problem Solving Through Programming In C	46%	Jan-Apr 2019 (12 Week Course)
131.	Shubham Chaudhary	Problem Solving Through Programming In C	61%	Jan-Apr 2019 (12 Week Course)
132.	Lakshmi Patel	1. Problem Solving Through Programming In C	56%	Jan-Apr 2019 (12 Week Course)
		2. Programming in C++	51%	Jan-Mar 2019 (12 Week Course)
		3. Data Base Management System	65%	Feb-Apr 2019 (8 Week Course)
		4. Programming in Java	68%	Jan-Apr 2019 (12 Week Course)
133.	Maneesh Kumar Gupta	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
134.	Aakash Gangwar	Fundamentals of Power Electronics	60%	Jan-Apr 2019 (12 Week Course)
135.	Preeti Gautam	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
136.	Simran Yadav	Fundamentals of Power Electronics	53%	Jan-Apr 2019 (12 Week Course)
137.	Asheesh Rajbhar	1. Electric Vehicles – Part 1	69%	Feb-Mar 2019 (4Week Course)
		2. Fundamentals of Power Electronics	52%	Jan-Apr 2019 (12 Week Course)
138.	Krishan Pal Singh	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
139.	Kumari Renu	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
140.	Shalini Patel	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
141.	Kumari Anjali Singh	Fundamentals of Power Electronics	50%	Jan-Apr 2019 (12 Week Course)
142.	Sweta Kumari	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
143.	Manish Kumar Bharati	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
144.	Dravid Singh	1. Problem Solving Through Programming In C	62%	Jan-Apr 2019 (12 Week Course)
		2. Better Spoken English	78%	Jan-Apr 2019 (12 Week Course)
145.	Girijesh Kumar	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
146.	Deepak Kumar	Problem Solving Through Programming In C	45%	Jan-Apr 2019 (12 Week Course)
147.	Deveshwar Nishad	Problem Solving Through Programming In C	68%	Jan-Apr 2019 (12 Week Course)
148.	Shashank Varahney	1. Problem Solving Through Programming In C	55%	Jan-Apr 2019 (12 Week Course)
		2. Developing Soft Skills and Personality	71%	Jan-Apr 2019 (12 Week Course)
149.	Alok Kumar	Control Engineering	41%	Jan-Apr 2019 (12 Week

				Course)
150.	Sandeep Kumar	Soil Mechanics / Geotechnical Engineering I	47%	Jan-Apr 2019 (12 Week Course)
151.	Ayush Pal	1. Electrical Machines –II	40%	Jan-Apr 2019 (12 Week Course)
		2. Better Spoken English	68%	Jan-Apr 2019 (12 Week Course)
152.	Ashwin Kumar Yadav	Electric Vehicles – Part 1	52%	Feb-Mar 2019 (4Week Course)
153.	Durgesh Kumar Yadav	Enhancing Soft Skills and Personality	80%	Feb-Mar 2019 (4Week Course)
154.	Ravi Shankar Gautam	Electrical Machines -II	43%	Jan-Apr 2019 (12 Week Course)
155.	Archana Yadav	Principles of Signals and Systems	54%	Jan-Apr 2019 (12 Week Course)
156.	Shantanu Singh	1. Machine Learning for Engineering and Science Applications	47%	Jan-Apr 2019 (12 Week Course)
		2. Data Base Management System	81%	Feb-Apr 2019 (8 Week Course)
157.	Deepak Kumar Kannaujiya	Electric Vehicles – Part 1	43%	Feb-Mar 2019 (4 Week Course)
158.	Tushar Tomar	Programming, Data Structures and Algorithms Using Python	70%	Jan-Mar 2019 (8 Week Course)
159.	Pawan Gupta	Advanced Topics in the Science and Technology of Concrete	43%	Jan-Feb 2019 (4 Week Course)
160.	Aman Singh	Advanced IOT Applications	46%	Jan-Mar 2019 (8 Week Course)
161.	Abhishek Kumar	Advanced Topics in the Science and Technology of Concrete	57%	Jan-Feb 2019 (4 Week Course)
162.	Ankit Kumar Gupta	Introduction to Remote Sensing	90%	Jan-Feb 2019 (4 Week Course)
163.	Prabhutva Singh	Advanced Topics in the Science and Technology of Concrete	47%	Jan-Feb 2019 (4 Week Course)
164.	Shashikant Singh	1. Concrete Technology	68%	Jul-Oct 2018 (12 Week Course)
		2. Soil Mechanics / Geotechnical Engineering I	47%	Jan-Apr 2019 (12 Week Course)
165.	Amit Kumar	Plastic Waste Management	60%	Feb-Apr 2019 (8Week Course)
166.	Pallavi Tripathi	Problem Solving Through Programming In C	45%	Jan-Apr 2019 (12 Week Course)
167.	Nidhi Pal	Introduction to Automata, Languages and Computation	49%	Jan-Apr 2019 (12 Week Course)
168.	Somesh Kumar Yadav	Data Mining	78%	Feb-Apr 2019 (8 Week Course)
169.	Pankaj Gangwar	Electrical Machines -II	58%	Jan-Apr 2019 (12 Week Course)
170.	Shivraj Vishwakarma	1. Fundamentals of Power Electronics	49%	Jan-Apr 2019 (12 Week Course)
171.	Durgesh Kumar	Developing Soft Skills and	75%	Aug-Oct 2019 (8 Week

	Yadav	Personality		Course)
172.	Dileep Kumar	Developing Soft Skills and Personality	60%	Aug-Oct 2019 (8 Week Course)
173.	Pawan Kumar	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
174.	Deveshwar Nishad	Developing Soft Skills and Personality	83%	Aug-Oct 2019 (8 Week Course)
175.	Keerti Soni	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
176.	Palak Jain	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
177.	Jayanti Soni	Developing Soft Skills and Personality	69%	Aug-Oct 2019 (8 Week Course)
178.	Sachin Kumar	Developing Soft Skills and Personality	79%	Aug-Oct 2019 (8 Week Course)
179.	Pranshu Tripathi	Fluid Mechanics	60%	Aug-Oct 2019 (8 Week Course)
180.	Anjali Omar	GPS Surveying	60%	Jul-Aug 2019 (4 Week Course)
181.	Priya Chaudhary	GPS Surveying	49%	Jul-Aug 2019 (4 Week Course)
182.	Shubham Singh	1. Calculus of One Real Variable	69%	Jul-Sep 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)

B. Coursera Courses completed by Students

Coursera Courses Done By Students							
S. No.	Name	Branch	Year	Course 1 Name	Course 2 Name	Course 3 Name	Course 4 Name
1.	Mansi Gupta	EE	Second	Introduction to personal branding			
2.	Saurabh Kumar	IT	Second	OOP in Java			
3.	Mohd Shadab	IT	Second	Java course by Duke University	Java programming: Solving problem with Software		
4.	Dimpy Yadav	IT	Second	Programming for everyday (Getting started with python)			
5.	Pallavi Pandey	IT	Second	Python Data Structures			
6.	Amit Tiwari	IT	Second	Programming with everybody (Python)			
7.	Vikas Yadav	IT	Second	C++ for C Programmers, Part	Python Basics	AI for Everyone	

				A			
8.	Harsh Mishra	CE	Second	AI for Everyone	Programming for Everybody (Getting Started with Python)	Grammar and Punctuation	
9.	Amit Kumar	CE	Second	AUTOCAD			
10.	Hari Pratap	CE	Second	Python			
11.	Sanjay Kumar	CE	Second	Programming for everybody (Getting started With Python)			
12.	Navneet Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
13.	Amit Kumar Gautam	EE	Second	C and C++			
14.	Amit Kumar Gautam	EE	Second	C and C++			
15.	Chandra Bhusan Yadav	IT	Second	Programming for Everybody (Getting Started with Python)	Python Data Structures		
16.	Adit Srivastava	IT	Second	Google IT Support	Introduction to web development	Introduction to html5	Introduction to CSS3
17.	Manas Singhal	IT	Second	Programming Fundamentals	Introduction to HTML5	Build a full Website using WordPress	Covid 19 : What you need to know
18.	Amit Kumar	IT	Second	HTML, CSS and JavaScript for web developers	Introduction to HTML 5	Introduction to CSS 3	Creative Problem Solving
19.	Kajal Gautam	IT	Second	Programming for Everybody (Getting Started with Python)			
20.	Janmejay Kumar	CE	Second	AutoCAD (INTERNSHALA)			
21.	Prashant Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
22.	Pankaj Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			

23.	Prashant Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
24.	Sushama Kumari	IT	Second	Python for everybody	Grammar and punctuation		
25.	Saurabh Verma	CE	Second	Autocad			
26.	Noor Mohammad	IT	Second	Excel Skills for Business:essentials			
27.	Aayush Kumar Vishodiya	IT	Second	Programming for Everybody (Getting Started with Python)			
28.	Atul Paswan	IT	Second	Programming with python			
29.	Aditya Singh	IT	Second	Programming for Everybody (Getting Started with Python)			
30.	Ayush Varma	IT	Second	Programming for Everybody (Getting Started with Python)			
31.	Ajay Kushwaha	IT	Second	Programming for Everybody (Getting Started with Python)			
32.	Priya Singh	IT	Second	Object Oriented Programming in Java			
33.	Arvind Yadav	IT	Second	Programming for everybody (getting started with python)			
34.	Prashant Kumar	IT	Second	Python for everybody: Getting started with python	Python training	Professional email writing	
35.	Prashant Kumar	IT	Second	Python for everybody: Getting started with Python	Python training	Professional email writing	
36.	Goud Akash Ramanuj	EE	Second	Programming with C and c++ training			
37.	Goud Akash Ramanuj	EE	Second	Programming with Cand C++			

				training			
38.	Aman Chhabra	IT	Second	Speak English Professionally: In Person , Online and On the Phone			
39.	Shivam Tiwari	CE	Second	Autodesk Certified Professional: AutoCAD for Design and Drafting Exam Prep			
40.	Shivam Tiwari	CE	Second	Autodesk Certified Professional: AutoCAD for Design and Drafting Exam Prep			
41.	Noor Mohammad	IT	Second	Excel Skills for Business: Essentials			
42.	Astha Vats	IT	Second	Programming for everybody (getting started with python)			
43.	Neha Verma	IT	Second	Programing for everybody(getting started with python)			
44.	Shivji	CE	Second	Programming for Everybody (Getting Started with Python)			
45.	Abhishek Singh	IT	Second	Programming for Everybody (Getting Started with Python)	Python Data Structures		
46.	Mausami Saroj	IT	Fourth	Python			
47.	Manvendra Singh	IT	Fourth	Introduction to Artificial Intelligence	Cloud computing		
48.	Manvendra Singh	IT	Fourth	Introduction to Self Driving Cars	Introduction To Data science Using Python	Python Basics	Data collection And Processing With Python

C. On-line Quiz Series organized by college

Quiz Date	Quiz Series	Total Participant
04/07/2020	Python Quiz for Beginners-1	922
13/07/2020	Python Quiz for Beginners-2	830
22/07/2020	Python Quiz for Beginners-3	480
30/07/2020	Python Quiz for Beginners-4	325
10/08/2020	Python Quiz for Beginners-5	304
24/08/2020	Python Quiz for Beginners-6	311
Total number of participants		3,172

Table 9.8 B: Extra-Curricular Activities (Off-line Mode) in Session 2019-20

Events	Descriptions	Date(s)
Dr. A.P.J. Technical, Literary & Management Fest	Activities at Zonal Level	8-9 November 2019
FEST EVENT KSHITIZ'19	National level Sport fest	1-3, March 2019
CRADLE 2018	It was an event of tree plantation in college campus	27, April 2018
FEST EVENT AVIGHNA	Annual Fest ,Technical cultural cum ,sport fest	4-7 April 2018
ROBOTICS Workshop	It was a 2 day workshop where students were introduced to Robotics	September 2017
SEMINAR	Seminar for final year student on YOGA	November 2017
FEST EVENT KSHITIZ'17	National level sport fest	2-,23 March 2017
TREASURO HUNT	Technical event	October 2016

Composition of CSA Team:

Table 9.9: Composition of CSA Team

1.	Chairman CSA	Mr. Prince Rajput
2.	Convenor of Sports Council	Dr. Ashish Kumar Mishra
3.	Convenor of Literary Council	Dr. Sushant Chaturvedi
4.	Convenor of Cultural Council	Mr. Sonu Kumar
5.	Convenor of Hobby Club	Mr. Amit Kumar Pandey
6.	Convenor of Photography and Fine Art Club	Mr. Sharad Verma
7.	Convenor of Technical Council	Dr. Arif Iqbal

List of events organized by different Councils:

Events of Sports Council:

Sr. No.	Name of event	Venue
1.	Athletics	Eklavya Stadium, Akbarpur
2.	Cricket	Eklavya Stadium, Akbarpur
3.	Foot ball	BNKV College, Akbarpur
4.	Table Tennis	Student Activity Centre
5.	Chess	Student Activity Centre
6.	Carom	Student Activity Centre
7.	Badminton	Eklavya Stadium, Akbarpur
8.	Volleyball	Volleyball Court
9.	Basketball	Basketball Court

Literary Council:

Sr. No.	Name of event	Venue
1.	Extempore (Hindi + English)	CSA Hall
2.	Poem (Hindi + English)	CSA Hall
3.	Dumb Charades	CSA Hall
4.	Vocabulary Quiz	CSA Hall
5.	Story Writing	CSA Hall
6.	Quiz	CSA Hall
7.	Philosophical Talk	CSA Hall

Hobby Club:

Sr. No.	Name of event	Venue
1.	Quiz	CSA Hall
2.	Balloon Pyramid + Balloon Race	Ground near Admin
3.	Arrow throw + Dare Dance + News Paper Reading, Writing	Ground near Admin
4.	Sack Race + Bath Tub + Mud Race + Clue Puzzle	Ground near Admin

Photography and Fine Art Club:

Sr. No.	Name of event	Venue
1.	Tattoo Making	Near CSA Hall
2.	Face Painting	Near CSA Hall
3.	Open Painting	Near CSA Hall
4.	T-Shirt Painting	Near CSA Hall
5.	Wall Painting	Near CSA Hall
6.	Charcoal Painting	Near CSA Hall
7.	Sketching	Near CSA Hall
8.	Rangoli Making	Near CSA Hall

Achievement of Students**Session: 2017-18****Event: ASMITA'17 (IIIT, ALLAHABAD), 9-11, February, 2017****Students Achievement in Sport Activity**

Event	Name(s)	Gold	Silver	Bronze	Other
Volleyball	Anand Kumar Chandra Shekhar Verma Akash Yadav Santosh Raj Manoj Verma Nishant Kumar Shubham Verma Shantanu Singh		Silver		
Basketball	Raj Shekhar Kushwaha Ghazanfar Hasan Praveen Kumar Mukul Dev Somesh Yadav Tarunesh Shivam Shivam Haldwaniya Suryank				4 th

Event: AVIGHNA'17 (REC, AMBEDKAR NAGAR), 4-8 APRIL, 2017

Total Strength: 82

Students Achievement in Sport Activity

Event	Winner Team (3 rd year)	Runner up team (1 st year)
Cricket	Mohit Maurya (Captain) Vikas Singh (vice-captain) Arvind Kumar Shukla Arnav Singh Rahul Anand Kumar Gupta	Tarunesh Shivam Suryank Ashish Kumar Rahul Kumar Mukul Tripathi Pranshu

	Akash Yadav	Vikas Sonkar
	Manish Sahni	Rohit Sonkar
	Manvendra Tripathi	Aditya
	Rishikant Barman	Ambuj Yadav
	Piyush Singh	Akash
	Dileep Yadav	Sarvesh Kumar

Badminton	Winner team (3rd year)	Runner up team (final year)
	Anand Kumar Gupta	Abhishek Sagar
	Mohit Maurya	Mayank Tyagi
	Praveen Kumar	Anil Kumar
	Arnav Singh	Golu Sonkar

Football	Winner team (3rd year)	Runner up team (Final Year)
	Rahul	Shashwat Gupta
	Mohit Maurya	Rahul Mishra
	Shivam Halwaniya	Abhishek Sagar
	Vikas Singh	Anil Kumar
	Arnav Singh	Manoj
	Manind Singh Chauhan	Golu Sonkar
	Rahul	Mayank Tyagi
	Anand Kumar Gupta	Sanjay Kumar Yadav
	Arvind Kumar Shukla	Ujjawal Sharma
	Ghazanfar Hasan	Mohit Bhaskar
	Bimal Patel	Ashish Kumar

Volleyball	Winner team (2nd year)	Runner up team (3rd year)
	Shantanu Singh	Akash Yadav
	Pratyush Yadav	Chandra Shekhar Verma
	Atul Tiwari	Shubham Verma
	Prashant Pratap Singh	Shubham Dixit
	Mayank Kumar	Manoj Verma
	Hemant	Anand Kumar
	Anoop	Piyush Singh
	Vijay Kumar	Abhishek Rai

Basketball	Winner team (1st year)	Runner up team (3rd year)
	Suryank Tarunesh Shivam Rajarshree Singh Md. Hammad Harsh Vardhan Abhishek Aditya	Ghazanfar Hasan Manind Singh Chauhan Shivam haldwaniya Praveen Kumar Abhay Rao Vikas Singh Mohit Maurya

Chess	Winner team (3rd year)	Runner up team (2nd year)
	Himanshu Soni Keshlal Rajat Kumar	Vedansh Singh Chandel Abhishek Priyadarshini

Carrom	Winner team (Final year)	Runner up team (2nd year)
	Anil Kumar Golu Sonkar	Shivam Kumar Rohit Kumar

Table Tennis	Winner team (Final year)	Runner up team (1st year)
	Manish Shahni (3 rd year) Praveen Kumar (3 rd year)	Rajrshee Singh (1 st year) Tarunesh Shivam (1 st year)

Athletics events	Winner(s)	Runner up(s)	2nd runner up(s)
100 m	Bimal Kumar Patel (3 rd year)	Anand Kuamr Gupta(3 rd year)	Sunil Kumar (final year)
4*100 m relay	Anand Kumar Gupta Bimal Kumar Patel Vikas Singh Mohit Maurya (All 3 rd Year)	Abhishek Sagar Sunil Kumar Anil Kumar Mayank Tyagi (All Final Year)	Mukul Dev Vibhanshu Vaibhav Neeraj Singh Prashant Pratap Singh (All 3 rd Year)
Long jump	Anand Kumar Gupta (3 rd Year)	Sunil Kumar (Final Year)	Bimal Kuamr Patel (3 rd Year)

High jump	Bimal Kumar Patel (3 rd Year)	Anand Kumar Gupta (3 rd Year)	Sunil Kumar (Final Year)
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Event	Winner team (2 st year)	Runner up team (1 st year)
Basketball	Alka Kumari Komal Verma Saraswati Kushawaha Komal Gautam Renu Aarti Yadav Greenish Satalwal	Vidu Manwal Ritu Singh Sikha Vertika Anita Shreya

Volleyball	Winner team (2 nd year)	Runner up team (1 st year)
	Sarita Kumari Rajni Kumari Deeksha Singh Alka Kumari Komal Gautam Shushma Gautam	Mausami Saroj Shalini Keshari Harshita Chaudhary Priyanka Kavita Apoorva Rao

Athletics events	Winner team	Runner up	2 nd runner up
High jump	Sarita Kumari (2 nd Year)	Saraswati Kushwaha (2 nd Year)	Ritu Saini (2 nd Year)
Shotput	Lakshmi Patel (1 st Year)	Sarita Kumari (2 nd Year)	Komal Gautam (2 nd Year)
Long jump	Lakshmi Patel (1 st Year)	Harshita Chaudhary (1 nd Year)	Ritu Saini (2 nd Year)
Discuss throw	Lakshmi Patel (1 st Year)	Sarita Kumara (2 nd Year)	Harshita (1 st Year)
Javelin throw	Lakshmi Patel (1 st Year)	Sarita Kumari (2 nd Year)	Mausami Saroj (1 st Year)
1500m race	Saraswati Kushwaha (2 nd Year)	Ritu Saini (2 nd Year)	Sarita Kumari (2 nd Year)
800m race	Saraswati Kushwaha (2 nd Year)	Ritu Saini (2 nd Year)	Komal Gautam (2 nd Year)
100m race	Komal Gautam (2 nd Year)	Ritu Saini (2 nd Year)	Saraswati Kushwaha (2 nd Year)
200m race	Komal Gautam (2 nd Year)	Saraswati Kushwaha (2 nd Year)	Ritu Saini (2 nd Year)

Event: SPARDHA'17 (IIT (BHU)), 21-23 October, 2017

Total Strength: 41

Students Achievement in Sport Activity

Events	Name	Gold	Silver	Bronze	Other
Carom	Preeti Valmiki Priyanka Singh Mausami Saroj	Gold			
High jump	Sarita Kumari		Silver		
Shot put	Lakshmi Patel		Silver		
Discuss throw	Lakshmi Patel			Bronze	

Event	Name	Gold	Silver	Bronze	Other
Carrom	Anil Kumar Pritam Abhishek Sagar Golu Sonkar	Gold			

Event: TVARAN'18 (KNIT SULTANPUR), 21-23 February, 2018

Total Strength: 48

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Madhu Shukla Vijeta Sharma Sakshi Agrawal Sarita Kumari Rajni Kumari Shalini Keshari Mausami Saroj Lakshmi Patel	Gold			

Basketball	Sarita Kumari Alka Kumai Komal Gautam Vidhu Manwal Ritu Singh Saraswati Kushawaha Aarti Yadav		Silver		
Table Tennis	Kamini Singh Shivalika Dev Sakshi Agrawal Simran Prakash	Gold			
Chess	Sadhna Nidhi Shivangi Vertika		Silver		

Carrom	Deepti Chawla Gomti Singh Priyanka Singh Mausami Saroj		Silver		
Shotput	Sarita Kumari		Silver		
Shotput	Lakshmi Patel	Gold			
Long jump	Lakshmi Patel			Bronze	
200 m	Vijeta Sharma		Silver		
100 m	Vijeta Sharma	Gold			
400 m	Ritu Saini Harshita Chaudhary		Silver	Bronze	
800 m	Saraswati Kushwaha	Gold			

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Santosh Raj Akash Yadav Shantanu Singh Chandra Shekhar Shubham Verma Shubham Dixit Prashant Pratap Singh				4 th
Cricket	Vaibhav Rai Mohit Maurya Vikas Singh Arnav Singh Arvind Kumar Shukla Akhilesh Kumar Amit Kumar Rahul Neeraj Singh Tarunesh Shivam Rahul Kumar Ashish Kumar				3 rd
Chess	Rahul Mishra Himanshu Kumar Vedansh Singh Chandel	Gold			
Long jump	Anand Kumar Gupta		Silver		

Session: 2018-19

Event: _UDGHOSH'18 (IIT KANPUR), 3-7 October, 2018

Total Strength: 33

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Javelin throw	Lakshmi Patel		Silver		

Event: KSHITIZ'19 (REC, AMBEDKAR NAGAR), 1-3, MARCH 2019

Students Achievement in Sport Activity

Events	Name(s)	Gold	Silver	Bronze	Other
Volleyball	Anand Kumar Chandra Shekhar Verma Akash Yadav Santhosh Raj Manoj Verma Nishant kumar Shubham Verma Shantanu Singh		Silver		
Basketball	Raj Shekhar Kushwaha Ghazanfar Hasan Praveen Kumar Mukul Dev Somesh Yadav Tarunesh Shivam Shivam Haldwaniya Suryank Rajashir Singh		Silver		

Event	Winner Team (3 rd year)	GOLD	SILVER	BRONZE
Cricket	Mohit Maurya (Captain) Vikas Singh (Vice-Captain) Arvind Kumar Shukla Arnav Singh Rahul Ashish Tarunesh Suryanak Avinash Neeraj Sauarabh Vinay	Gold		

Volleyball	Winner Team	GOLD	SILVER	BRONZE
	Anand Chand Shekhar Shubham Dixit Shantanu Prashant Hemant Om Singh Vishambhar Prakhar Amit		SILVER	

Football	WINNER TEAM	GOLD	SILVER	BRONZE
	Rahul Kapil Nikhil Virendra Alok Anubhav Suyank Varunesh			

	Ritesh Deveshwar Ankit Devanand Rajan Saurabh			
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Chess	Winner team	GOLD	SILVER	BRONZE
	Himanshu Soni & Team	GOLD		

Basketball	Winner team	GOLD	SILVER	BRONZE
	Suryank Tarunesh Shivam Rajarshree Singh Gajanfar Rajsheker Mukul Dev Praveen Vaibhav Somesh		SILVER	
Carom	Winner team	GOLD	SILVER	BRONZE
	Shreyas & Team	GOLD		

Table tennis	Winner team	GOLD	SILVER	BRONZE
	Manish Shahni & Team	GOLD		

Athletics events	Winner (s)	GOLD	SILVER	BRONZE
100m	Rajan Kumar		SILVER	
4*100 m relay	Mukul Dev & Team	GOLD		
200 m	Rajan Kumar			BRONZE
400 m	Mukul Dev	GOLD		
800 m	Madhusudan		SILVER	
1500 m	Rahul Raj		SILVER	
3000 m	Amar Gond	GOLD		
5000 m	Rahul Raj	GOLD		
Long jump	Saurabh Singh			BRONZE
High jump	Mohit Maurya		SILVER	

Event	Winner team	GOLD	SILVER	BRONZE
Basketball	Sarita Kumari & Team	Gold		

Volleyball	Winner team	GOLD	SILVER	BRONZE
	Vijeta Sharma & Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
BADMINTON	Alka Kumari and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
CHESS	Sadhana Priyadarshi and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
CARROM	Deepti Chawla and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
KABADDI	Sarita Kumari and Team	GOLD		

Athletics events	Winner team	GOLD	SILVER	BRONZE
High jump	Sarita	GOLD		
Shotput	Lakshmi Patel	GOLD		
Long jump	Harshita	GOLD		
Discuss throw	Sarita	GOLD		
Javelin throw	Lakshmi Patel	GOLD		
3000 m	Ritu Saini	GOLD		
1500 m race	Ritu Saini	GOLD		
800 m race	Ritu Saini	GOLD		
100 m race	Komal Gautam		SILVER	
200 m race	Renu		SILVER	

Event: TVARAN'18 (KNIT SULTANPUR), 21-23 February, 2018

Total Strength: 48

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Santosh Raj Akash Yadav Shantanu Singh Chandra Shekhar Shubham Verma Shubham Dixit Prashant Pratap Singh				4 th
Cricket	Vaibhav Rai Mohit Maurya Vikas Singh Arnav Singh Arvind Kr. Shukla Akhilesh Kumar Amit Kumar Rahul Neeraj Singh Tarunesh Shivam Rahul Kumar Ashish Kumar				3 rd

Chess	Rahul Mishra Himanshu Kumar Vedansh Singh Chandel	Gold			
Long jump	Anand Kumar Gupta		Silver		

Event: UDGHOSH'18 (IIT, KANPUR), 3-7 October, 2018

Total strength: 33

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Javelin throw	Lakshmi Patel		Silver		

CRITERION 10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	<i>Institutional Points=90</i>
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10.1. Organization, Governance and Transparency (40)

10.1.1. State the Vision and Mission of the College (5)

Vision

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

Mission

- To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.
- To enhance knowledge and skills of students in science, technology and human behavior that will serve the nation.
- To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

10.1.2. Governing body, administrative setup, functions of various bodies, service rules, procedures, recruitment and promotional policies (10)

Governing Bodies

The members of the governing body of the society to which, by rule Bye-laws of the society, the management of its affairs is entrusted are:

Table 10.1: Governing Bodies

1.	Nominee, Ministry of Technical Education (U. P.)	Chairman
2.	Principal Secretary/Secretary, Technical Education Department (U. P.)	Vice-Chairman
3.	Secretary, Finance Department (U. P.)	Member
4.	Director, Indian institute of technology, Kanpur	Member
5.	Director, MNNIT Allahabad, Prayagraj (U. P.)	Member
6.	Director, Technical Education, Uttar Pradesh, Kanpur	Member
7.	A nominee of the All India Council for Technical Education	Member
8.	One eminent technologist/engineer having specialization in the field advent to college to be nominated by Board	Member
9.	Vice-Chancellor of the University to which the college is affiliated	Member

10.	One Professor to be nominated by the Board for one year by rotation in order of seniority	Member
11.	Two eminent person in the field of Technical Education to be nominated by the state government	Member
12.	One eminent person from industry to be nominated by the state government	Member
13.	One representative from scheduled caste/scheduled tribe from amongst reputed teachers /educationist/industrialist nominated by the chairman, Governing Body	Member
14.	One representative from other Backward class from reputed teacher/educationist /industrialist nominated by the chairman, Governing Body	Member
15.	Director of the college	Member/Secretary

10.1.3. Decentralization in working and grievance redressal mechanism (5)

Administrative Set Up:

List the names of the faculty members who have been delegate d powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee.

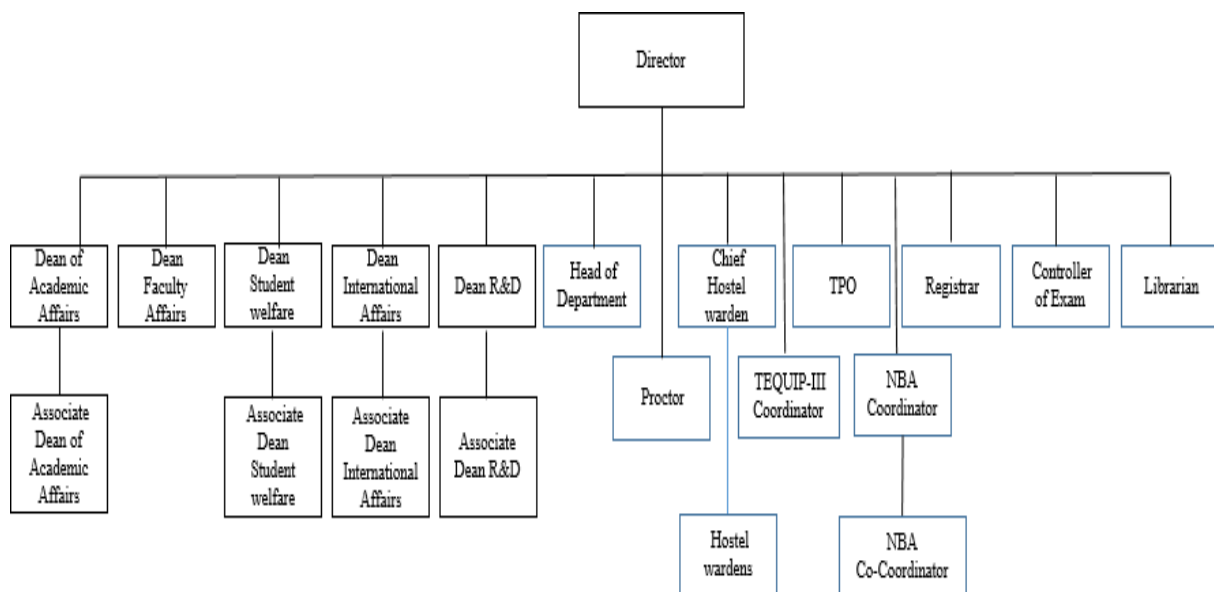


Fig.: 10.1 Administrative Set Up

Table 10.2: Various Administrative Responsibilities by Faculty Members

Designation	Name
Director	Prof. Vishal Singh Chandel
Registrar	Dr. Devendra Pratap Mishra
Account Officer	Shri Abhishek Verma
Coordinator Social Awareness Activities	Dr. S. P. Singh
Co-Coordinator Social Awareness Activities	Mr. Avaneesh Kumar Yadav
Head, Department of Electrical Engineering	Dr. S. P. Singh
Head, Department of Information Technology	Dr. Sudhakar Tripathi
Head, Department of Civil Engineering	Dr. Ayush Mittal
Head, Department of Applied Sciences. & Humanities	Prof. Vishal Singh Chandel
Coordinator Accreditation	Dr. Sudhakar Tripathi
Dean Academic Affairs	Dr. Prabhudatt Dwivedi
Associate Dean Academic Affairs	Mr. Amit Kumar Rai
Dean of Faculty Affairs	Dr. S. P. Singh
Dean of Student Welfare	Dr. Amit Kumar Singh
Dean of Student Welfare	Dr. Amit Kumar Singh
Associate Dean Faculty Affairs	Dr. Prabhudatt Dwivedi
Associate Dean of Student Welfare	Dr. Arif Iqbal
Dean International Affairs	Dr. Sudhakar Tripathi
Associate Dean International Affairs	Dr. Sanjay Agrawal
Dean Research & Development	Dr. Sudhakar Tripathi
Associate Dean Research & Development	Dr. Ramesh Chand Pandey
Chief Vigilance Officer	Dr. Puneet Joshi
I/C. Maintenance	Mr. Vivekanand Singh
I/C Maintenance (Civil)	Mr. Nitin Kumar Shukla
I/C Electrical Maintenance (Electrical)	Dr. Mohd. Aslam Husain
Chairman CSA	Mr. Prince Rajpoot
Controller of Examination	Mr. Vikas Patel
I/C. Library	Dr. Puneet Joshi
I/C. Remedial Classes & Skill Development	Dr. Sushant Chaturvedi
I/C. House Allotment Committee	Dr. Saurabh Srivastava

Coordinator of Digital Education	Dr. Ashish Kumar Mishra
Addl. Controller of Examination	Dr. Amit Kumar Pandey
O.I/C. Guest House	Mr. Prince Rajpoot
O.I/C. Class Rooms	Mr. Lokesh Kumar Yadav
O.I/C. Vehicle	Dr. Saurabh Srivastava
Public Information Officer	Registrar
Additional Public Information Officer	Dr.Prabhudatt Dwivedi
Workshop In-charge	Mr. Vivekanand Singh
O. I/C. Central Store	Dr. Arif Iqbal
O. I/C. Security	Dr. Puneet Joshi
Coordinator, TEQIP-III	Prof. Vishal Singh Chandel
O.I/C. Procurement TEQIP-III	Mr. Sharad Verma
Co-Coordinator Accreditation	Mr. Amit Kumar Rai
Co-Coordinator of Digital Education	Mr. Shivendu Mishra
Nodal Officer Academic TEQIP-III	Mr. Amit Kumar Rai
Nodal Officer Finance TEQIP-III	Shri Abhishek Verma
O. I/C. Internet Operation & Maintenance	Mr. Shivendu Mishra
O. I/C. Website Hosting & Management	Dr. Ashish Kumar Mishra
O.I/C. Horticulture & Upkeep of Campus	Dr. M. Aslam Husain
Additional I/C. Horticulture & Upkeep of Campus	Mr. Nitin Kumar Shukla
Equity Action Plan Coordinator	Mr. Sonu Kumar
Coordinator GATE	Dr.Ayush Mittal
Start-up Coordinator	Mr. Vikas Patel
O. I/C Admin	Dr. Yudhishtir Pandey
O. I/C Account's & Purchase	Mr. Sharad Verma
SWAYAM & SWAYAM PRABHA Coordinator	Mr. Shivendu Mishra
Industry Institute Interaction Coordinator	Mr. Sharad Verma
Faculty Coordinator	
Faculty Coordinator Training & Placement	Mr. Shivendra Pandey
Faculty Coordinator Training & Workshop	Mr. Nitin Kumar Shukla
Faculty Coordinator Internship	Mr. Sharad Verma
Dept. Representatives for Career Development Cell	

Civil Engineering Department	Dr. Ayush Mittal
Electrical Engineering Department	Mr. Sonu Kumar
Information Technology Department	Mr. Shivendu Mishra
Faculty Coordinator Alumni Affairs	
Dean Student's Welfare	Dr. Amit Kumar Singh
I/C. Institute Industry Interaction Cell	
Civil Engineering Department	Mr. Amit Kumar Rai
Information Technology Department	Mr. Sharad Verma & Mr. Amit Kumar
Electrical Engineering Department	Mr. Vikas Patel & Dr. Yudhishtir Pandey
Officer I/C. Time Table	
Deptt. Representatives	
Applied Sc. & Hum. Department	Mr. Vivekanand Singh
Civil Engineering Department	Mr. Avaneesh Kumar Yadav
Information Technology Department	Dr. Ramesh Chand Pandey
Electrical Engineering Department	Mr. Vikas Patel
Chief Warden	Dr. Ramesh Chand Pandey
Warden Boys Hostels	
Ambedkar Hostel	Mr. Sonu Kumar & Mr. Lokesh Kumar Yadav
Gandhi Hostel	Dr. Amit Kumar Pandey and Mr. Nitin Kumar Shukla
Atal Hostel	Mr. Amit Kumar Rai
Kalam Hostel	Mr. Shivendra Pandey & Mr. Paritosh Bhushan
Wardens A. S. Girls Hostel	Ms. Kumkum Dubey
Students Counsellors' for	
All Non first year Students	Dr. Yudhishtir Pandey
Civil Engineering First Year	Dr. Ayush Mittal
Information Technology First Year	Dr. Ashish Kumar Mishra
Electrical Engineering First Year	Dr. Puneet Joshi
Proctorial Board	
Chief Proctor	Mr. Vikas Patel
Associate Proctor	Dr. Sushant Chaturvedi
Members of Proctorial Board	Dr. Ashish Kumar Mishra
	Mr. Nitin Kumar Shukla
	Dr. Yudhishtir Pandey

	Mr. Vivekanand Singh
	Mrs. Shikha Choudhary
Co-Coordinator TEQIP-III	Dr. Saurabh Srivastava
Co-Coordinator Procurement TEQIP-III	Mr. Lokesh Kumar Yadav
Coordinator, Improvements of Language Competency, Soft Skill and Confidence Level	Dr. Sushant Chaturvedi

As per directive of the MHRD/AICTE for prevention of ragging in the Rajkiya Engineering College, Ambedkar Nagar Campus and hostel an anti-ragging committee has been constituted for the academic session 2017-18 and so far.

An anti-ragging committee		
1.	Dr. Amit Kumar Singh	Chairman
2.	Dr. Prabhudatt Dwivedi	Convener
3.	Dr. S. P. Singh	Member
4.	Chairman, Council of student activities	Member
5.	Chief Proctor	Member
5.	Conveners of various student council	Member
7.	Chief warden, (Boys' and Girls') Hostel	Member

An anti-Ragging squad		
1.	Mr. Vikas Patel	Member
2.	Mr. Shivendra Kumar Pandey	Member
3.	Dr. Amit Kumar Pandey	Member
4.	Miss Kumkum Dubey	Member

Grievance Redressal Mechanism Committee		
Grievance Redressal Officer (GRO)	Dr. Amit Kumar Singh	aksingh@recabn.ac.in
Member	Dr. Mohd. Aslam Husain	mahusain@recabn.ac.in
Member	Mr. Sharad Verma	sharad.reca@gmail.com
Member	Dr. Devendra Pratap Mishra	mishradev@recabn.ac.in
A faculty and staff grievance redressal		
1.	Dr. Vishal Singh Chandel (Professor APSH)	Chairman
2.	Dr. Sudhakar Tripathi (Associate Prof. ITD)	Member
3.	Dr. S. P. Singh (Associate Prof. EED)	Member
4.	Dr. Prabhudatt Dwivedi (Asst. Prof. APSH)	Member
5.	Mr. Avaneesh Kumar Yadav (Asst. Prof. CED)	Member
6.	Ms. Shweta Tiwari (Guest Faculty)	Member
7.	Mr. R.C. Prajapati (Staff Representative)	Member

Anti-sexual harassment committee		
1.	Ms. Kumkum Dubey (Guest Faculty)	Member
2.	Ms. Shweta Tiwari (Guest Faculty)	Member
3.	Mrs. Shikha Choudhary (Guest Faculty)	Member
4.	Dr.Prabhudatt Dwivedi (Asst. Prof. APSH)	Member
5.	Dr. Mohd. Aslam Husain (Asst. Prof. EED)	Member

10.1.4. Delegation of financial powers

(5)

10.1.5.

College should explicitly mention financial powers delegated to the Director, Heads of Departments and relevant In-charges. Demonstrate the utilization of financial powers for each of the assessment years.

Central Purchase Committee:

There shall be a Central Purchase Committee (herein after in this rule referred to as committee) which shall consist of:

a)	The Director	Chairman
b)	Two senior members of the faculty to be nominated by the Board of Governors	Member
c)	Head of the Indenting Department	Member
d)	One member to be nominated by the Government	Member
e)	Accounts Officer	Member
f)	Registrar	Member/Secretary

There shall also be Departmental Purchase Committees consisting of the followings:

a)	Head of the Concerned Department	Chairman
b)	One senior member of concerned Department to be nominated by the Head.	Member
c)	One member from other faculty to be nominated by Director	Member

- Purchase up to Rs.1, 00, 000/- pertaining to a particular department would be made on the recommendation of the Departmental Purchase Committee.
- All purchases above Rs.1, 00, 000/- would be made on recommendation of the Central Purchase Committee. The Government nominee's presence would be essential in the meetings of the Committee finalizing purchases amounting to Rs.10.00 lacs & above.
- Purchase procedures would be as per Government rules, and directives of the Government in this regard issued from time to time.

10.1.6. Transparency and availability of correct/unambiguous information in public domain (5)

(Information on policies, rules, processes and dissemination of this information to stake holders is to be made available on the website)

10.2. Budget Allocation, Utilization, and Public Accounting at College level (15)

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year – CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2), CFYm3 (Current Financial Year minus 3)

AT COLLEGE LEVEL

Total Income and Actual Expenditure at College level: For CFY, CFYm1, CFYm2 & CFYm3

CFY: Current Financial Year – CFYm1 (Current Financial Year minus 1), CFYm2 (Current Financial Year minus 2), CFYm3 (Current Financial Year minus 3)

For CFY (2020-21) (Data given upto 30/11/2020)

Total Income				Actual Expenditure			Total No. of students (750)
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
293.94	473.76	-	33.43	505.04	-	1.29	-

For CFYm1 (2019-20)

Total Income				Actual Expenditure			Total No. of students (750)
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
319.09	436.56	-	210.95	909.25	-	-	-

For CFYm2 (2018-19)

Total Income				Actual Expenditure			Total No. of students (750)
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
315.60	417.51		373.32	735.02			

For CFYm3 (2017-18)

Total Income				Actual Expenditure			Total No. of students (750)
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/ Any other specify (Lacs)	Expenditure per student (Lacs)
325.59	312.76	-	427.95	316.60	-	-	

Breakup of Budgeted amount and Actual Expenditure

Items	Budgeted in 2020-21 (Lacs)	Actual expenses in 2020-21 (Till) (Lacs)	Budgeted in 2019-20 (Lacs)	Actual expenses in 2019-20 (Till) (Lacs)	Budgeted in 2018-19 (Lacs)	Actual expenses in 2018-19 (Till) (Lacs)	Budgeted in 2017-18 (Lacs)	Actual expense s in 2017-18 (Till) (Lacs)
Infrastructure	-	-	-	-	-	-	-	-
Built-Up	-	-	-	-	-	-	-	-
Library	1.00	0.06	1.00	1.00	2.0	0.66	25	0.238
Laboratory equipment	4.40	-	4.00	2.60	2.0	2.0	25	20.06
Laboratory consumables	1.50	0.09	1.50	-	1.0	1.02	6	4.72
Teaching and Non-teaching staff salary	672.27	438.66	546.56	576.23	534.78	515.35	544.88	316.60
Maintenance and spares	21.90	1.18	23.50	14.23	20.0	19.88	12	12
Travel	5.00	0.66	4.00	2.48	3	3	2	0.91
Miscellaneous	311.17	65.31	243.90	312.71	319.52	245.36	73.12	81.85
Total	1017.24	505.96	824.46	909.25	882.30	787.28	688	435.66

10.2.1. Adequacy of budget allocation

(10)

The budget allocation and utilization in the Institute is a well-defined process wherein the account section of institute seeks the fund requirement from various departments of the Institute for the next financial year. These requirements are then summed up and total budget requirement is prepared at the central level. This demand is then sent to the state government

for the allocation of the funds. The Institute has been receiving adequate funds to meet its expenses.

10.2.2. Utilization of allocated funds (15)

The funds are utilized as per Dr. A. P. J. Abdul Kalam Technical University (AKTU) rules. The budget allocation and utilization of the Institute for the past three years has been given in the above Tables.

10.2.3. Availability of the audited statements on the institute's website (5)

The Audited statements are available on college website at following link.

http://recabn.ac.in/?page_id=3954

10.3 Library and Internet (20)

(A) Central Library, R.E.C. Ambedkar Nagar:

The Knowledge Centre (Central Library) at the Rajkiya Engineering College (REC), Ambedkar Nagar, is a Resource Centre for academic and research activities in the areas of Engineering Teaching and Literatures in English language. The Central Library has been built to International Standards. It spread over to an area of 4500 sq. m. with ground plus three floors. The library is equipped with a Reference Section with a seating capacity 100 students, Cyber Library (Digital Library) Room, Audio Visual Section, Journal Section, Newspaper and Magazine Section, Conference Room, Research Scholar Section. It has numerous specialized collections of Books, Journals, NDL, ASME (*American Society of Mechanical Engineers*), ASTM (The American Society Of Mechanical Engineers), IEEE-ASPP (Institute of Electrical and Electronics Engineers - All Society Periodicals Package), Springer, Gate Engineering, and McGraw Hill (Nalanda E-Consortium –AKTU e-consortium Project). The library is fully computerized system which enables the students to search the required books they specifying the author, title, subject and keywords. It facilitates the users to reserve the books they need, and also updates on the status of a particular book and that of the User. The state-of-the library is the heart of engineering institute's teaching, learning and research activities with access to most of the referred databases of the world. The fully-automated library is powered by LibSys / Koha and Dspace library software and has the facility to access e-resources 24x7 within and in the campus. The library has been actively conducting National Digital Library of India (NDL) and NPTEL Video courses for students every evening.

RAJKIYA ENGINEERING COLLEGE

राजकीय इंजीनियरिंग कॉलेज अम्बेडकर नगर

KNOWLEDGE CENTRE (CENTRAL LIBRARY)

AMBEDKAR NAGAR-224122, U.P.(INDIA)

Knowledge Centre (Central Library)



Knowledge Centre (Central Library), REC, Ambedkar Nagar, U.P.

• **LibSys Admin Login**
<http://192.168.0.110:8080/sease>

• **Search Book Catalogue (OPAC)**
<http://192.168.0.110:8380/opac>

E-RESOURCES ONLINE ACCESS : [List of Institutions Repositories - DSpace Link in India:](#)

• http://jvclrecamb.blogspot.com/p/blog-page_8.html

• **National Digital Library of India (NDL):**
<http://ndl.iitkgp.ac.in>

The Rajkiya Engineering College (REC) Ambedkar Nagar, library was established in 2010. Later the current building established in 2015. As a separate unit to provide bibliographical, documentation and information support to teaching and engineering program of the institute. It was named as Jai Ram Verma Central Library in April, 2016. The library was named as Knowledge Centre in year 2018. The Library has been computerised for circulation and searching of books with LibSys / KOHA Software. The Institutional Repositories is provided with digitized B.Tech. Project Report and Dissertation/Theses and Question Papers etc. E-journals access called E-Journals Access is provided by UGC-INFLIBNET Centre. The Digital Knowledge Centre has 25 Computers for e-Journal access. The total area of the Library building is about 14338 Sq.ft.

E-RESOURCES ACCESS: <https://library.kiit.ac.in/openaccess/repositories.html>

[AMBEDKAR NAGAR, U.P.]

A well-equipped library, having an area of 2287.5m² (carpet area inclusive of ground floor, first floor and second floor) and ground area about 762.5m², number of titles available is 386 and 8384 number of volumes available. The capacity of library is 125 students. The library provides open access to students and faculty for search of reading material and the library services are computerized besides Internet and reprographic facilities. The Library has been computerised for circulation and search of books with Libsis Software. The Cyber room of Library has 25 Computers for open access of e-resources.

WORKING HOURS :

Library is kept open from 9:00 AM to 5:00 PM on all working days of the Institute and 10:00AM to 4:00 PM on Sundays and Holidays (examination period).

Day	Timings
Monday- Saturdays	09.00 A.M. - 08.00 P.M. (Examination Period). 10.30 A.M. - 4.00 P.M. (Circulation)
Sundays/Holidays	Closed
During Vacation	10.00 A.M. - 05.00 P.M.

GENERAL RULES : ADMISSION TO LIBRARY

1. Entry by Identity Card.
2. A person desirous of using the library has to enter his/her name, address, time (in and out) and put his/her signature in the register kept for the purpose at the entrance of the library.
3. Personal belongings such as publications, bags, brief cases, boxes, umbrellas, mobile phones, portable computers, floppies, CDs/DVDs and such other articles brought by any of the Members including REC Members are to be left on the rack kept for the purpose at the entrance of the library at their own risk.
4. Users are requested to deposit their bags/belongings (other than valuables) at the Property Counter.
5. Every member must sign the Register available at the entrance.
6. Users should register their names in the Register attendance system kept at the entrance.
7. Users are requested to observe silence inside the library.
8. Users are requested not to replace the books on shelves.
9. Misuse of library facilities is an offence and calls for punishment as decided by the competent authority.
10. Users are requested to keep the library neat and tidy.
11. Personal printed reading materials are not allowed inside the library.
Personal belongings like bags, umbrellas, personal books etc. are to be kept at property counter against token.
12. Library reserves the right to check the contents of the items deposited at the property counter.
13. In case the property counter token is lost, the deposited article may be claimed with proper identification after producing a written request with a fee of Rs. 5/-

14. Outsider can consult the library for research purpose after producing letter of introduction from Supervisor/ Head of the Dept.
15. Photography, smoking, sleeping, use of cell phone and talking loudly are strictly prohibited. in the library.
16. Readers should not mark, underline, dog-ear mark, write, tear pages or damages the library documents.
17. Theses/Dissertations/Project Report for B.Tech. Final Year cannot be Xeroxed.
18. Strict silence and discipline must be maintained in the library.
19. Members should behave in a reasonable and seemly fashion in the library and must not damage library property or disturb other readers.
20. Readers should not spit in any part of the library.
21. Newspapers and magazines must be read only in the library on specific tables and should not be taken to other reading areas.
22. No library material can be taken out from the library without permission.
23. Readers should not shelve books and periodicals as that disturb the prescribed order.
24. Notices, publicity materials/wall writing etc. are not allowed in any part of the library building.
25. Members leaving the library should show the material borrowed or taken out of the library by them to the Security Guard for checking purpose.
26. Anyone who violates the rules and regulations of the library would be liable to lose the privilege of library membership.
27. Published in: Library

LIBRARY MEMBERSHIP:

Library membership is open to the member of the university community (i.e. teachers, officers, research scholars, students and other employees of the institute). Consultation facility is also provided to the teachers and research scholars of other academy and colleges, on production of proper identity /recommendations from concerned authority.

Library Online Membership Form for Faculty, Student & Staff in Knowledge Centre (Central Library) at R.E.C. Ambedkar Nagar; [Online Library Membership Form / Lib. Card Issue Form Link: https://docs.google.com/forms/d/e/1FAIpQLSdbx7R7ZVNcUIMkt-ES5ujjyF3-f_EYQDIDzNsolKPXpdYSHg/viewform](https://docs.google.com/forms/d/e/1FAIpQLSdbx7R7ZVNcUIMkt-ES5ujjyF3-f_EYQDIDzNsolKPXpdYSHg/viewform)

BORROWING FACILITIES

Sl. No.	Member Details	No. of Books	Loan Period
1.	Faculty Members	10	One Sem. (Jan. to June & July to Dec.)
2.	Students	6 Sem. & 2	One Sem.(Jan. to June & July to Dec.)15 Days
3.	Non-Teaching Staff	5	15 Days

OVERDUE CHARGES :

1. No overdue publications are renewed over telephone or through any kind of message/letter. The publications are to be presented physically at the issue counter for renewal.
2. Six books (text) will be issued for one semester to each student. Student will return these books after examination. Four books (reference) may be issued for fifteen (15) days only. Rs.00.50 will be charged per day as fine if not returned on due date. A book must be returned by the due date otherwise a fine of **fifty paise** per book per day will be imposed.
3. Reserved books will be not issued to students. They can study in the library. However, faculty members may get issued these books for two days only. Print journals/periodicals will not be issued.
4. Library members will deposit new book of latest edition if they lost/stolen the book. Otherwise, they will have to deposit double the cost of that book.
5. Books borrowed must be returned on or before the due date.
6. Renewal can be done at any time.
7. Books will have to be physically presented for renewals.
8. Books will be renewed if there are no reservations.
9. Users are requested to verify the physical condition of the book/s before borrowing.
10. For late return of books, overdue charges will be collected as per rules in force.
11. Users are requested to collect receipt for fine amount paid by them.
12. A book may be renewed on request if it is not required by some other member.
13. Please help to keep the book fresh & clean.
14. A book should be returned on or before the date last stamped below. An overdue charge of **Fifty Paise** will be levied for each day the book is kept beyond that date. You are advised to abide to the Library Rules. Overdue charge of 50 Paise per book per day is charged for late return of books.
15. No overdue publications are renewed over telephone or through any kind of message/letter. The publications are to be presented physically at the issue counter for renewal and then the case will be put up to Director for necessary action.

The Central Library provides different types of library services to its users. These may be summarized as:

- OPAC searching
- Reference service
- Reading service
- Lending to departmental libraries
- Photocopying service by adhering to the Copyright provisions
- Internet facilities for on-line access to journals
- Database search through DELNET Service, Nalanda E-Consortium-AKTU e-consortium Project and INFLIBNET; E-ShodhSindhu: Consortium for Higher Education Electronics etc.
- CD/DVD writer and print out facilities for downloaded data
- e-Subscription

PHOTOCOPYING FACILITY :

Photocopy facility is provided to students at minimal rates as follows:

S.No.	Particulars	Rate/Copy
1.	Single side page photo copy (One page A4 size)	Rs.1.00
2.	Two side page photo copy (Both Side) (for 20 pages rate is applicable)	Rs.1.00
3.	Two side page photo copy (Both Side) (more than 20 pages rate applicable)	Rs.1.00
4.	Colour printing (for A4 Paper per page)	Rs.1.00
5.	Colour printing for Bond paper/Glossy paper/Certificate printing	Rs.1.00
6.	Identity card colour printing	Rs.1.00
7.	A3 size page printing Black & White	Rs.1.00
8.	A3 size paper printing Colour	Rs.1.00

BOOKSTORE SECTION @ KNOWLEDGE CENTRE (CENTRAL LIBRARY) :

S.No.	Bookstore Section	No. of Title	No. of Vol.
1.	Civil Engineering	30	1850
2.	Electrical Engineering	97	1171
3.	Information Technology	85	2705
4.	APSH	160	2642
	Others	14	16
TOTAL		386	8384

USEFUL LINK :

Library Admin Login and OPAC link will be connected to link of Knowledge Centre (Central Library):

- **Librarian ADMIN Login** : <http://192.168.0.110:8080/lsease>
- **Library OPAC (Online Public Access Catalogue) Link /web library:**
<http://192.168.0.110:8380/opac>

BOOKS & JOURNALS RECOMMENDATION FORM for Central Library, Rajkiya Engineering College (R.E.C.) Ambedkar Nagar

Online Books /Journals Suggestion Form ; Hyperlink:

<https://docs.google.com/forms/d/1Syy1IElu2awh1JQwHnYJFkbVTXYkaFNIIJyka1arMp8/edit>

College News Letter, R.E.C. ABN. (Please send any types of news/event/activities. Regarding: college, faculty, staff & students); Hyperlink : https://docs.google.com/forms/d/11_rVDL-43wbRF5dTUaO4loJcBB-xZz7ikqbawh_J1E/edit

DELNET Link : <http://www.delnet.in> **Login:** uprecan **Password:** rec8006

CENTRAL LIBRARY ORGANISATION CHART



Prof. Vishal Singh Chandel
Director, Rajkiya Engineering College, Ambedkar Nagar

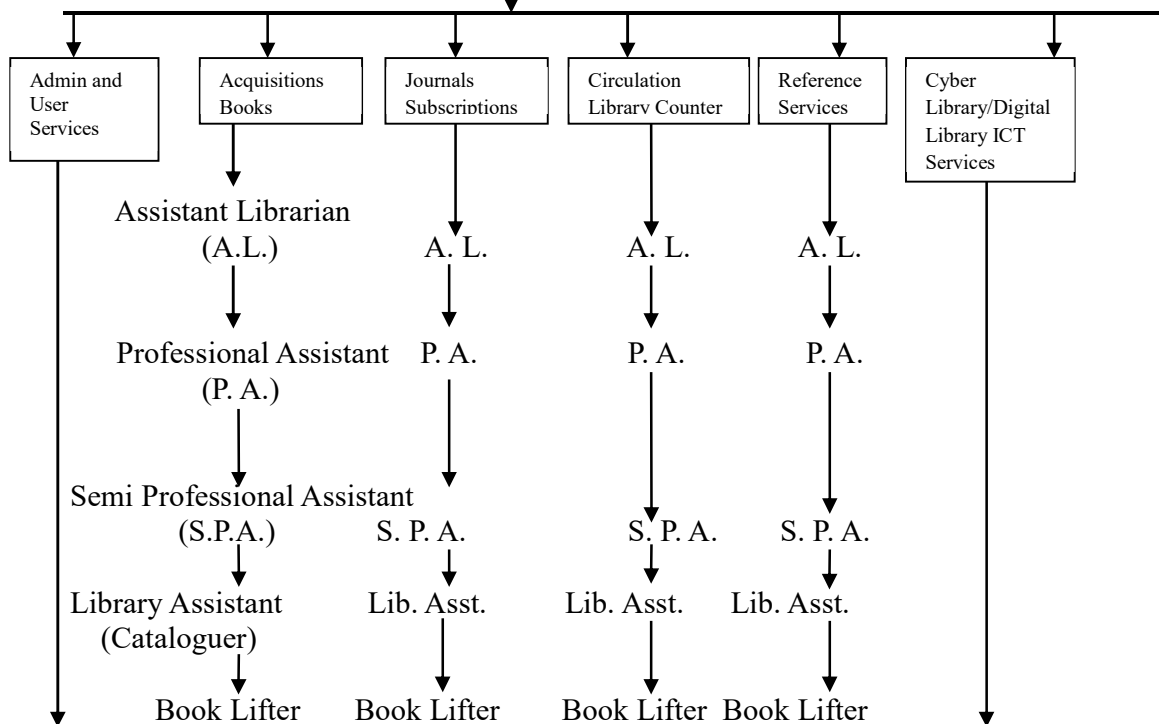
DIRECTOR

Library Advisory Committee

Faculty-LIBRARY INCHARGE

LIBRARIAN

Deputy Librarian




INFORMATION SCIENTIST**Central Library Team :**

Dr. Puneet Joshi (Library In-charge),
Assistant Professor, Department of Electrical Engineering,
R.E.C. - ABN.
E-mail id: libic@recabn.ac.in
Contact No.: 9012872877

LIBRARY ADVISORY COMMITTEE (LAC) MEMBERS :

The Director will constitute the Library Advisory Committee. The proposed composition of the present third Library Advisory Committee is as under:

S.No.	Name of Library Advisory Committee Members
01.	Dr. Puneet Joshi (Asstt. Prof.-EED), LAC-Chairperson
02.	Mr. Nitin Shukla (Asstt. Prof.-CED), LAC-Member
03.	Mr. Lokesh Kumar Yadav (Asstt. Prof.-EED), LAC-Member
04.	Mr. Sonu Kumar (Asstt. Prof.-EED), LAC-Member
05.	Dr. Ashish Kumar Mishra (Asstt. Prof.-ITD), LAC-Member
06.	Mr. Prince Rajpoot (Asstt. Prof.-ITD), LAC-Member
07.	Dr. Amit Kumar Pandey (Asstt. Prof.-APSH), LAC-Member
08.	Dr. Saurabh Srivastava (Asstt. Prof.-APSH), LAC-Member
09.	Dr. Ashok Kumar Upadhyaya (Guest Faculty-APSH), LAC-Member
10.	Mr. Ramesh Chandra Prajapati (Account Consultant-Account Deptt.), LAC-Member
11.	Mr. Brijesh Kumar Verma (Library Professional), LAC-Member Sec.

LIBRARY STAFF (TEAM) :

Library is glad to declare another learning, resource and training support administration team for each branch. This is finished with an expectation to offer compelling scholastic help to the personnel, research researchers and understudy network. If you don't mind find under a short idea note and the rundown of library staff who will be engaged with this movement.



Mr. Brijesh Kumar Verma,
Library Professional, Knowledge Centre
(Central Library), R.E.C. ABN.,
E-mail id: jvrecamb@gmail.com
Contact No.: 9930560317



Mr. Ramdular, Asstt. Library,
Electrical Engg. Deptt. Book Stock
Section, Knowledge Centre (Central
Library), R.E.C. ABN.,
E-mail id: ramdular91195@gmail.com
Contact No.: 9598556457



Mr. Himanshu Patel, Book Lifter,
APSH Book Stock Section, Knowledge
Centre (Central Library), R.E.C. ABN.,
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Contact No.: 8573030100



Mr. Narendra Kumar, Book Lifter,
Civil Engg. Deptt. Book Stock Section,
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Mr. Pawan Shukla, Book Lifter,
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Section, Knowledge Centre (Central
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anuragmishra7380703501@gmail.com
Contact No.: 8081928832



Mr. Santosh Sharma, Sweeper,
Knowledge Centre (Central Library),
R.E.C. ABN.,
E-mail id: santoshksharma737@gmail.com
Contact No.: 7408932519

DEPARTMENTAL LIBRARY:

1. Civil Engineering Department Library
2. Electrical Engineering Department Library
3. Information Technology Department Library
4. APSH Department Library

AVAILABILITY OF NEWSPAPERS AND MAGAZINES (BOTH GENERAL AND TECHNICAL):

Name of Newspapers:

1. Dainik Jagran (Hindi)
2. Hindustan (Hindi)
3. Amar Ujala (Hindi)
4. Swatantra Bharat (Hindi)
5. The Times of India (English)

Name of Magazines:

- A. Chronicle (Hindi)
- B. Chronicle (English)
- C. Pratiyogita Darpan Hindi Masik (Hindi)
- D. Current Affairs (Hindi)

GENERAL /REFERENCE BOOKS DETAILS : Availability of books beyond curriculum.

Reference books of Reputed Authors are available in the Knowledge Centre (Central Library) , which are the beyond of curriculum of Dr. A.P.J. Abdul Kalam Technical University, Lucknow. Students can refer these books to enhance their knowledge. These reference books are very much helpful for college students.

ALL E-RESOURCES AVAILABLE IN THE LIBRARY APP.

लाइब्रेरी कैटलॉग ए आरआईसी अम्बेडकरनगर के लिए इस ऐप को इंस्टॉल करें। देखेंसस जीपे। चव वित स्पइतंतल ब्जंसवहनमए त्ठ। उइमकांत छंहंत ब्स्पबा भ्मतम रु.

<https://play.google.com/store/apps/details?id=jrv.library.rec.reclibrary>

S.N.	DETAILS	DEPT.	NO. OF TITLE	NO. OF VOL.
01.	Total No. of Title and Volumes Available	CE	30	1850
		EE	97	1171
		IT	85	2705
		APSH	160	2642
		OTHERS	14	16
		TOTAL	386	8384
02.	DELNET Services (DEVELOPING LIBRARY NETWORK)	<ul style="list-style-type: none"> ✓ Resource through DELNET data bases ✓ Inter library loan and document delivery services ✓ Reference services ✓ Professional training ✓ Software support 		
03.	SOFTWARE	LIBSYS (LSEASE VERSION)	01 NO.	
04.	SERVER	LIBRARY WINDOWS SERVER	01 NO.	
05.	COMPUTER	CYBER LIBRARY	25 NOS.	
06.	INTERNET CONNECTION AND WIFI	ALL	25 COMPUTERS + WIFI	
07.	SEATING CAPACITIES	ALL	125	
08.	AREA	ALL	4500 SQM	
09.	Name of the Internet provider	BSNL and Reliance Jio		
10.	Available bandwidth	100 Mbps		
11.	Wi Fi availability	Yes, 24 X 7		
12.	Internet access in labs, classrooms, library and offices of all Departments	Yes, through Wi-Fi and Wired network Security arrangements		
13.	E-Books and E-Journals Access	<ul style="list-style-type: none"> • Nalanda E-Consortium-AKTU e-consortium Project • DELNET Services • N-LIST e-Resources (e-Shodh Sindhu) [Under Process] 		

OPEN E-RESOURCES ONLINE ACCESS

List of Institutions DSpace Link State wise Repositories in India (DSpace Repositories available on the internet):

OPEN ACCESS E-BOOKS/E-JOURNALS/E-RESOURCES COMPLIED BY CENTRAL LIBRARY (KNOWLEDGE CENTRE) TEAM Link:-

http://jvclrecamb.blogspot.com/p/blog-page_8.html?m=1

ONLINE E-THESES & DISSERTATION Link:

- **Networked Digital Library of Theses and Dissertations**
<http://www.ndltd.org/>
- **Shodhganga, INFLIBNET Centre: a reservoir of Indian Theses Link:**
<https://shodhganga.inflibnet.ac.in/>
- **ETDs - Shodhbhagirathi @ IITR**
<http://shodhbhagirathi.iitr.ac.in:8081/jspui/>
- **ETDs-Pondicherry University Institutional Repository Link:**
<http://dspace.pondiuni.edu.in/xmlui/>
- **MG University Theses (Nitva) Link:** <http://www.mgtheses.in/>
- **Digital Repository of Theses and Dissertations of Indian Institute of Science, Bangalore, India, Link:** <http://etd.iisc.ac.in/>
- **Dyuthi@CUSAT Link:** <https://dyuthi.cusat.ac.in/jspui/>
- **Spoken Tutorial Project, IIT Bombay Link:**
<https://spoken-tutorial.org/>

E-Resources online access:

- **SWAYAM Free Online Courses& MOOCs**
<https://swayam.gov.in/>
- **NPTEL Free Online Courses and MOOCs**
<http://nptel.ac.in/>
- **National Digital Library of India(NDL)**
<http://ndl.iitkgp.ac.in>
- **Networked Digital Library of Theses and Dissertations (NDLTD)**
<http://www.ndltd.org/>

List of DSpace Repositories in India (Available on the Internet)

List of Institutions Web based DSpace Link State wise Repositories in India has been updated:-

- IITB Dspace Link : <http://dspace.library.iitb.ac.in/jspui/>
 - KIIT Dspace Link : <http://www.kiit.ac.in/centrallibrary/openaccess/repositories.html>
 - IIT Roorkee Dspace Link : <http://roar.eprints.org/5420/>
 - IITD Dspace Link : <http://eprint.iitd.ac.in/> <http://library.iitd.ac.in/aboutus/page7.html>
1. Human Rights Law Network, Delhi: <http://109.74.198.40:8087/jspui/>
 2. IGNOU, Delhi: <http://www.egyankosh.ac.in/>
 3. Indian Institute of Technology, Delhi: <http://eprint.iitd.ac.in/>
 4. Indraprastha Institute of information Technology, Delhi: <https://repository.iiitd.edu.in/jspui/>
 5. NISCAIR-National Science Digital Library, Delhi:
<http://nsdl.niscair.res.in/handle/123456789/939>
 6. NISCAIR-Online Periodical Directory, Delhi: <http://nopr.niscair.res.in/>
 7. Parliament of India, Official debates of Rajyasabha, Delhi: <http://rsdebate.nic.in/>
 8. World Health Organisation Southeast Asian Region Digital Repository, Delhi:
<http://repository.searo.who.int/>
 9. National Centre for Antarctic and Ocean Research, Goa:
<http://dspace.ncaor.org:8080/dspace/index.jsp>
 10. National Institute of Oceanography (NIO), Goa: <http://drs.nio.org/drs/index.jsp>
 11. INFLIBNET- Institutional Repository, Gujarat: <http://ir.inflibnet.ac.in/>
 12. INFLIBNET-Institutional-Shodhganga- Indian ETD, Gujarat:
<http://shodhganga.inflibnet.ac.in/>
 13. M.S University of Baroda, Gujarat: <http://14.139.121.106:8080/jspui/>
 14. Pandit Deendayal Petroleum University, Gandhinagar, Gujarat:
<http://203.77.192.116:8080/xmlui/>
 15. University of Kashmir, Jammu & Kashmir:
<http://dspace.uok.edu.in/jspui/#.Uf4RptLTwng>
 16. Indian Institute of Astrophysics, Bangalore, Karnataka: <http://prints.iiap.res.in/>
 17. Indian Institute of Horticultural Research, Karnataka: <http://www.erepo.iihr.ernet.in/>

18. Indian Institute of Science, Bangalore, Karnataka: <http://etd.ncsi.iisc.ernet.in/>
19. Indian Statistical Institute, Bangalore, Karnataka: <https://drtc.isibang.ac.in/>
20. Institute for Social and Economic Change, Karnataka: <http://203.200.22.249:8080/jspui/>
21. KLE University, Karnataka: <http://182.48.228.18:8080/jspui/>
22. Raman Research Institute, Bangalore, Karnataka: <http://dspace.rii.res.in/>
23. T. John Institute of Technology, Karnataka: <http://122.181.173.88/jspui/>
24. University of Mysore-Vidyanidhi Project, Karnataka:
<http://dspace.vidyanidhi.org.in:8080/dspace/>
25. Vivekananda Institute of Technology (VKIT), Karnataka: <http://118.102.236.139:81/jspui/>
26. Cochin University of Science and Technology-Digital Library, Kerala:
<http://dspace.cusat.ac.in/jspui/>
27. Cochin University of Science and Technology-Dyuthi, Kerala:
<http://dyuthi.cusat.ac.in/xmlui/>
28. Indian Institute of Management, Kozhikode, Kerala: <http://dspace.iimk.ac.in/>
29. Indian Institute of Spices Research, Kerala: <http://220.227.138.214:8080/dspace/>
30. School of Communication and Management Studies (SCMS) group, Kerala:
<http://dspace.scmsgroup.org/>
31. Sree Chitra Thirunal Institute for Medical Sciences & Technology, Trivandrum, Kerala
<http://dspace.sctimst.ac.in/jspui/>
32. Sree Narayana Gurukulam College of Engineering, Kerala: <http://117.239.73.132/>
33. Gokhale Institute of Politics and Economics, Maharashtra: <http://dspace.gipe.ac.in/jspui/>
34. Indian Institute of Technology , Bombay, Maharashtra: <http://dspace.library.iitb.ac.in/jspui/>
35. Indira Gandhi Institute of Development Research, Maharashtra:
<http://oii.igidr.ac.in:8080/jspui/>
36. Inter-University Centre for Astronomy and Astrophysics, Maharashtra:
<http://www.iucaa.ernet.in:8080/jspui/>
37. National Centre for Radio Astrophysics, Maharashtra:
<http://ncralib1.ncra.tifr.res.in:8080/jspui/>
38. Urban Aspirations in Global Cities, Maharashtra: <http://uagc.tiss.edu/jspui/>

39. Vidya Prasarak Mandal, Maharashtra: <http://dspace.vpmthane.org:8080/jspui/index.jsp>
40. North-Eastern Hill University, Meghalaya: <http://dspace.nehu.ac.in/>
41. Indian Institute of Technology, Roorkee, Orissa: <http://bhagirathi.iitr.ac.in/dspace/>
42. National Institute of technology, Rourkela (NITR), Orissa:
<http://dspace.nitrkl.ac.in/dspace/>
43. Pondicherry University, Pondicherry: <http://dspace.pondiuni.edu.in/jspui/>
44. Thapar University, Patiala, Punjab: <http://dspace.thapar.edu:8080/dspace/>
45. Institute of Mathematical Sciences, Tamil Nadu: <http://www.imsc.res.in/xmlui>
46. SRM University, Tamil Nadu: <http://digitallibrary.srmuniv.ac.in/dspace/>
47. Central Institute of medicinal and Aromatic Plants, UP: <http://kr.cimap.res.in/index.jsp>
48. Indian Institute of Petroleum, Uttarkhand: <http://library.iip.res.in:8080/dspace/>
49. Aryabhata Research Institute of Observational Sciences, Uttarkhand:
<http://210.212.91.105:8080/jspui/handle/123456789/1>
50. Anwesan @ SNLTR by CSE, IIT Kharagpur, West Bengal:
<http://anwesan.iitkgp.ernet.in:8080/jspui/>
51. Indian Association for the Cultivation of Sciences, West Bengal:
<http://arxiv.iacs.res.in:8080/jspui/>
52. Indian Statistical Institute Kolkata, West Bengal: <http://library.isical.ac.in/jspui/>
53. Jadavpur University, West Bengal: <http://dspace.jdvu.ac.in/>
54. West Bengal Public Library Network, West Bengal:
<http://dspace.wbpublibnet.gov.in:8080/jspui/>

(B) College Internet

Name of the Internet provider: BSNL

Available bandwidth: 100 Mbps

Wi-Fi availability: Yes, 24 X 7

Internet access in labs, classrooms, library and offices of all Departments: Yes, through Wi-Fi and Wired network Security arrangements.

Declaration

I undertake that, the college is well aware about the provision in the NBA's accreditation manual concerned for this application, rules, regulations, notifications, and NBA expert visit guidelines in force as on date and the college shall fully abide by them.

It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that and an appropriate disciplinary action against the college will be initiated by NBA, in case of any false statement/Information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date: 11.02.2021

Place: Ambedkar Nagar

(Prof. Vishal Singh Chandel)

Officiating Director

Rajkiya Engineering College, Ambedkar Nagar (U. P.)



ANNEXURE-I

(A) PROGRAM OUTCOMES (POs)

POs	Engineering Graduates will be able to:
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.
PO2	Problem analysis: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.

(B) PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1	An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.
PSO2	An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.
PSO3	An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.