



## YEARLY STATUS REPORT - 2020-2021

### Part A

#### Data of the Institution

##### 1. Name of the Institution

SHRI RAMDEOBABA COLLEGE OF  
ENGINEERING AND MANAGEMENT,  
NAGPUR

- Name of the Head of the institution **Dr. Rajesh S. Pande**
- Designation **Principal**
- Does the institution function from its own campus? **Yes**
  
- Phone No. of the Principal **07122580011**
- Alternate phone No. **9607980531**
- Mobile No. (Principal) **9822224468**
- Registered e-mail ID (Principal) **principal@rk nec.edu**
- Address **Shri Ramdeobaba College of  
Engineering and Management,  
Ramdeo Tekdi, Katol Road, Nagpur**
  
- City/Town **Nagpur**
- State/UT **Maharashtra**
- Pin Code **440013**

##### 2. Institutional status

- Autonomous Status (Provide the date of conferment of Autonomy) **26/03/2011**
- Type of Institution **Co-education**

- Location **Urban**
- Financial Status **Self-financing**
- Name of the IQAC Co-ordinator/Director **Dr. (Mrs.) A.A.Khurshid**
- Phone No. **07122580011**
- Mobile No: **9890419732**
- IQAC e-mail ID **iqac@rknec.edu**

**3.Website address (Web link of the AQAR (Previous Academic Year))** <http://www.rknec.edu/Imp%20Links/Docs/AOAR%202019-20.pdf>

**4.Was the Academic Calendar prepared for that year?** **Yes**

- if yes, whether it is uploaded in the Institutional website Web link: <http://www.rknec.edu/Imp%20Links/AcademicCalendar.aspx>

### 5.Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
<b>Cycle 1</b>	<b>A</b>	<b>3.10</b>	<b>2014</b>	<b>10/12/2014</b>	<b>09/12/2019</b>
<b>Cycle 2</b>	<b>A+</b>	<b>3.35</b>	<b>2021</b>	<b>28/02/2022</b>	<b>27/02/2027</b>

**6.Date of Establishment of IQAC** **14/08/2013**

**7.Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC, etc.)?**

Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount
Institution	RGSTC-TIFACMSME Internship Program	Rajiv Gandhi Science & Technology Commission (RGSTC), Technology Information, Forecasting and Assessment Council (TIFAC)	14/01/2020	5908507
Management Technology	PRERANA	All India Council for Technical Education (AICTE)	14/03/2019	650000
Management Technology	Unnatt Bharat Abhiyan	Ministry of Human Resource Development, Govt. of India	24/08/2018	50000
Institution	PhD Scheme of	Govt. of India Ministry of Comm and IT, Dept. of Electronics and Information Technology New delhi.	15/06/2016	8138400
Institution	FIST Level-0	Department of Science and Technology (DST)	19/12/2016	2250000

Institution	ASPIRE: A scheme for promotion of innovation, rural industrialization and entrepreneurship	Ministry of Micro Small & Medium Enterprises, GOI	18/09/2017	3925000
Management Technology	Performance Evaluation of Pradhan Mantri MUDRA Yojana (PMMY)-An Empirical Study of Beneficiaries of Nagpur District	Indian Council of Social Science Research	17/09/2019	525000
Electronics Engineering	Technology Adaptation Project - Creation of Apps and Virtual class room for Non Formal Sanskrit Education	Rashtriya Sanskrit Sansthan	01/03/2020	200000
Computer Science Engineering	Research Project	Ministry of Coal,GOI	14/03/2021	13000000

**8. Provide details regarding the composition of the IQAC:**

- Upload the latest notification regarding the composition of the IQAC by the HEI [View File](#)

**9.No. of IQAC meetings held during the year 4**

- Were the minutes of IQAC meeting(s) and **Yes**

compliance to the decisions taken  
uploaded on the institutional website?

- If No, please upload the minutes of the meeting(s) and Action Taken Report
- No File Uploaded

**10. Did IQAC receive funding from any funding agency to support its activities during the year?** **No**

- If yes, mention the amount

**11. Significant contributions made by IQAC during the current year (maximum five bullets)**

Four new Under Graduate Programmes in emerging areas a) B.E. Computer Science and Engineering (Artificial Intelligence & Machine learning), b) B.E. Computer Science and Engineering ( Cyber Security ), c) B.E. Computer Science and Engineering ( Data Science ), d) B.E. Biomedical Engineering and one Post Graduate Programme M.Tech Robotics & Automation started.

Establishment of Center of Excellence for Energy Research

Significant Increase in patent publications.

Ranked in NIRF Ranking 2021. The Institute has been Ranked 119 in Engineering Category in All India Ranking.

Two International Conferences organised a) International Conference on Intelligent Systems, Data Science and Computing [ICIDC-2020] b) International Conference on Electronic System, Signal Processing and Computing Technology (ICESC-2020)

**12. Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:**

Plan of Action	Achievements/Outcomes
Establishment of Energy Research Center	Energy Research Center is established.
Introduction of Four new UG Programmes and One PG Programme in emerging areas	Four Under Graduate Programmes a) B.E. Computer Science and Engineering (Artificial Intelligence & Machine learning), b) B.E. Computer Science and Engineering ( Cyber Security ), c) B.E. Computer Science and Engineering ( Data Science ), d) B.E. Biomedical Engineering and one Post Graduate Programme M.Tech Robotics & Automation started.
Organization of International Conferences	Two International Conferences organised a) International Conference on Intelligent Systems, Data Science and Computing [ICIDC-2020] b) International Conference on Electronic System, Signal Processing and Computing Technology (ICESC-2020)
Organization of Faculty Development Programmes, Workshops, Seminars	36 Faculty Development Programmes, Workshops, Seminars
To increase the number of MoU's with industries to help students for internship and placements	03 new MoU's with industries
To encourage faculty for quality research papers	Six Days Online International Faculty Development Program (I - FDP) on
Conduction of External Academic Assessment and Audit	Due to COVID 19, External Academic Assessment and Audit were not conducted
Conduction of Green Audit	Green Audit was conducted and certificate was reissued on 12.03.2021

To apply for NBA Accreditation for UG and PG programmes	BE Industrial Engineering granted one year accreditation extension by NBA
To increase the number of patent publications	Significant Increase in patent publications.
To encourage faculty and students to enroll for MOOC's courses	1733 students and 122 faculties completed MOOC's courses
To organize training programmes for staff	30 training programmes was organised for staff
Apply to various funding agencies	Received 7 grants from funding agencies
To strengthen the Centre of Positive Emotional Health	Student counselling by the center was provided during pandemic to improve mental health
To organize more community service activities to contribute to the wellness of the society	Community service activities include mental health counselling, financial contribution towards PMcares and CM relief fund and services to Nagpur Municipal Corporation and Nagpur Police department during pandemic
Improve NIRF Ranking	Participation in NIRF Ranking 2021. Institute has Ranked 119th in Engineering Category in All India Ranking.

13. Was the AQAR placed before the statutory body? **Yes**

- Name of the statutory body

Name of the statutory body	Date of meeting(s)
Board of Management	21/01/2022

14. Was the institutional data submitted to AISHE ? **Yes**

- Year



## Part A

### Data of the Institution

<b>1.Name of the Institution</b>	SHRI RAMDEOBABA COLLEGE OF ENGINEERING AND MANAGEMENT, NAGPUR
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<b>3.Website address (Web link of the AQAR (Previous Academic Year)</b>	<a href="http://www.rknec.edu/Imp%20Links/Docs/AQAR%202019-20.pdf">http://www.rknec.edu/Imp%20Links/Docs/AQAR%202019-20.pdf</a>
<b>4.Was the Academic Calendar prepared for that year?</b>	Yes
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<b>9.No. of IQAC meetings held during the year</b>	4	
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<b>11.Significant contributions made by IQAC during the current year (maximum five bullets)</b>		
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<p>Establishment of Center of Excellence for Energy Research</p>		
<p>Significant Increase in patent publications.</p>		
<p>Ranked in NIRF Ranking 2021. The Institute has been Ranked 119 in Engineering Category in All India Ranking.</p>		
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To organize more community service activities to contribute to the wellness of the society	Community service activities include mental health counselling, financial contribution towards PMcares and CM relief fund and services to Nagpur Municipal Corporation and Nagpur Police department during pandemic
Improve NIRF Ranking	Participation in NIRF Ranking 2021. Institute has Ranked 119th in Engineering Category in All India Ranking.
<b>13. Was the AQAR placed before the statutory body?</b>	<b>Yes</b>
<ul style="list-style-type: none"> <li>Name of the statutory body</li> </ul>	
Name of the statutory body	Date of meeting(s)
Board of Management	21/01/2022
<b>14. Was the institutional data submitted to AISHE ?</b>	<b>Yes</b>

- Year

Year	Date of Submission
01/12/2020	28/03/2022

### 15. Multidisciplinary / interdisciplinary

The Institute has constituted a committee for implementation of NEP 2020. The committee in its meetings discussed that present undergraduate programmes integrate humanities and arts with Science, Technology, Engineering, and Mathematics (STEM) . The features already implemented in the curriculum as a part of NEP include

- Interdisciplinary PG programme in Robotics and Automation
- Multidisciplinary UG programme in Biomedical Engineering
- multidisciplinary open elective courses like
- Provision for earning extra credits through Minor certification
- Value-based courses like Bhagwat Gita, Human relationship dynamics, and Gender and cultural studies
- Courses on environment studies liberal arts and humanities like environmental science, fundamentals of economics, photography, theatre, ornithology
- Credit transfer through MOOCs
- MoUs' to enable credit transfer with foreign universities University of Florida, Teeside university, Northumbria university, UMASS Lowell, UDC, Washington DC, Deakin University, London school of training, RIT ,USA,N+I engineering institutes, France

The good practices include

- projects in the areas of community engagement and service through UBA and NSS
- environmental education through NSS and REEF
- Participation in RGSTC-TIFAC-MSME scheme to solve problems of MSMEs'
- One semester industry/research internship

The Institute has started following undergraduate programmes in the emerging areas



- B.Tech Computer Science and Engineering ( Artificial Intelligence and Machine Learning)
- B.Tech Computer Science and Engineering (Data Science)
- B.Tech Computer Science and Engineering (Cyber Security)

The curriculum is framed by seeking feedback from all stakeholders and the faculties are encouraged to design their own curricular and pedagogical approaches within the approved framework for effective delivery of courses and attainment of learning outcomes.

The institution supports collaborative approaches leading to multidisciplinary solutions and to promote more multidisciplinary research endeavours, the following centers of excellence (COE) are established.

- TATA -CIIIT COE
- NVdia COE
- Intellisense COE for microsystems
- QCFI COE
- Center for energy research

Also the provision of one semester research internship in the curriculum helps students to involve in research.

#### **16.Academic bank of credits (ABC):**

The Institute has registered for the Academic Bank of Credit through the Digi locker NAD portal. The Institute has been making every effort for internationalizing education and credit transfer prior to the notification of NEP 2020. MoUs' has been signed with the University of North Florida and UMASS Lowell for credit transfer.

#### **17.Skill development:**

The Institute regularly organizes soft skill enhancement programs through the Career Development and placement cell in alignment with NSQF in physical and online modes. The curriculum includes the following courses for the Soft Skills development of students

- Practical course Personality development
- Audit course on Professional Skill Development and Soft Skills
- Open elective on Human Relationship Dynamics and Psychology for Professional Growth.
- Course on Organizational behavior

Also, following practices help in developing soft Skills beyond the curriculum

- Group activities in the Language Lab that not only aim directly at the intended objective of enhancing English and employability skills but also help develop soft skills.
- Group tasks given as assignments in various courses in Humanities help the students strengthen their soft skills
- Students' Club activities
- Guest lectures on soft skills

The Institute promotes value-based education to inculcate positivity among students by offering an audit course on the Constitution of India as an audit course which helps to inculcate constitutional and citizenship values in the students as well as teach them the values of peace, and righteous conduct as citizens as enshrined in the Indian Constitution. Some of the elements of the course on business and technical communication taught in various programmes teach the learners about ethical conduct as professionals, not only in terms of their behaviour but in professional writing too.

The good practices include

- REEF, the environment club which aims at inculcating the value of love for nature and non-violence towards animals. As part of activities like bird watching they learn righteous conduct which is the ethical way of conducting themselves during this activity so that they do not harm the birds and their habitat. This also helps develop humanistic values. The team activities help the students learn life skills such as handling stress, making long-lasting friendships, conflict resolution, time management, thinking beyond "self", self-responsibility, etc.
- Induction program at the entry-level incorporates lectures on universal human values.
- NSS activities promoting among students the universal human values.

- Yoga course/Sports activities to strengthen humanistic and ethical behaviour as well as life-skills.

### **18.Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course)**

The Curriculum includes an open elective course on Bhagwad Geeta and a non-credit mandatory course on Indian traditional knowledge for all undergraduate programmes. The institution promotes Indian languages and Sanskrit is being taught as an open elective course in the undergraduate programmes. The course on Indian traditional Knowledge various topics related to basic Indian traditional knowledge, Indian philosophical & artistic traditions to knowledge of traditional Indian Science and technology.

Indian arts include Chitrakal, Murtikala, Vastu Kala, sangeet ,Nritya and Sahitya which are also a part of the course on Indian traditional knowledge.

The faculty members are well versed to provide delivery in bilingual language.

The good practices include formation of students' club related to Indian arts such as Music, Drama and Dance where the students are trained from certified trainers to encourage creativity and better understanding of cultural practices. Students are taught about the importance of Indian cultural heritage with specific reference to traditional art forms as well as folk and tribal art forms of India.

### **19.Focus on Outcome based education (OBE):Focus on Outcome based education (OBE):**

The initiative to transform the curriculum towards OBE started with the preparation of NBA accreditation for the programmes since 2001. Presently the Institute has 07 NBA accredited B.Tech programmes, as per the Washington Accord framework. Efforts were made to conform to the NBA guidelines while defining the programme outcomes (POs). PEOs were defined considering the vision and mission of the Institute, and stakeholder inputs. The programme specification by professional associations/bodies were also considered. The Departments have developed COs for the courses under various programmes and were mapped to POs, and PSOs of the programmes. For individual level computation of attainment, regular in-house workshops are conducted for faculty. Faculty members have undergone online courses on OBE.

As per the set-up procedure, the implementation at the faculty level starts with the specification of the teaching plan in all offered programmes. Teaching plans defines unit-wise engagements as per weightage for evaluation and assessment. The units have been mapped to COs. While setting the question paper, care is taken to ensure coverage of entire syllabus and specification of COs and Revised Bloom Taxonomy levels. Questions papers are subjected to moderation for verification of the above. Besides evaluation of students' performance, the marks awarded against various questions are tabulated against the COs for further analysis and calculation of CO/PO attainment.

The good practices in regard to capture OBE in teaching-learning practices include

- Training programs by IQAC on implementation of OBE
- Certification through online faculty development programs
- Regular Discussion of attainment of POs and PSOs and plan of action in BOS/ IQAC meetings
- Question papers reflecting Cos and learning levels as per Revised Blooms taxonomy
- Regular review/revision of course outcomes in BOS meeting

#### **20.Distance education/online education:**

The Institute has been constantly promoting online education, the use of technological tools, and blended learning for teaching learning activities which have resulted in increased student engagement & learning outcomes. The curriculum has a provision for credit transfer through MOOCs as well as dropping a course that allows students to learn at their own pace. Learning autonomy to students is provided by facilitating the use of e-learning materials/resources.

The good practices adopted include the use of technology as a tool to enhance learning in the content area and following are the key points

- Collaborative tools like Google Forms/Google Docs are used for information sharing and collection.
- Use of online platforms like YouTube and Zoom/Google Meet to conduct classes and presentations.
- Use of digital platform for delivery of assignments to students.

<b>3.Academic</b>	
3.1 Number of courses in all programmes during the year:	<b>791</b>
<b>File Description</b>	<b>Documents</b>
Institutional Data in Prescribed Format	<a href="#">View File</a>
3.2 Number of full-time teachers during the year:	<b>236</b>
<b>File Description</b>	<b>Documents</b>
Institutional Data in Prescribed Format	<a href="#">View File</a>
3.3 Number of sanctioned posts for the year:	<b>224</b>
<b>4.Institution</b>	
4.1 Number of seats earmarked for reserved categories as per GOI/State Government during the year:	<b>646</b>
4.2 Total number of Classrooms and Seminar halls	<b>69</b>
4.3 Total number of computers on campus for academic purposes	<b>1687</b>
4.4 Total expenditure, excluding salary, during the year (INR in Lakhs):	<b>1188.17</b>
<b>Part B</b>	
<b>CURRICULAR ASPECTS</b>	
<b>1.1 - Curriculum Design and Development</b>	
1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which are reflected in Programme Outcomes (POs), Programme	

Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

The curriculum development is carried out by Statutory Bodies associated with the Institute, considering the local, national, regional and global needs. The focus of learning experience is 'Student Centric'. The Institute has adopted a skill/ability oriented 'Outcome Based Education' system with emphasis on hands-on practices, field projects, innovation and industry exposure to address local, regional, national as well as global requirements.

The course contents are frequently updated taking into account the feedback from stakeholders and technological trends. The Institute has started four undergraduate and one postgraduate programme in the emerging areas, 162 new courses were introduced and 21 courses' contents are revised in the year 2020-21. The industries across the region are offering courses or parts of the syllabus are taught by experts from the industry. The key highlights include:

1. One semester industry internship[VIII Semester]
2. Adoption of Choice Based Credit System
3. Open Electives, Credit Transfer, MOOCs.
4. Enrichment of entrepreneurship education through courses on Design Thinking and Entrepreneurship Development
5. Development of bilingual abilities through languages like German and Sanskrit
6. Introduction of courses on emerging technologies like: electric vehicles, internet of things(IOT), artificial intelligence(AI), cloud computing, supply chain management, environment protection etc.

File Description	Documents
Upload additional information, if any	<a href="#">View File</a>
Link for additional information	<a href="http://www.rknec.edu/Academics/syllabus.aspx">http://www.rknec.edu/Academics/syllabus.aspx</a>

### 1.1.2 - Number of Programmes where syllabus revision was carried out during the year

21

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<a href="#">View File</a>
Details of syllabus revision during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

### 1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

305

File Description	Documents
Curriculum / Syllabus of such courses	<a href="#">View File</a>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<a href="#">View File</a>
MoUs with relevant organizations for these courses, if any	No File Uploaded
Any additional information	No File Uploaded

## 1.2 - Academic Flexibility

### 1.2.1 - Number of new courses introduced across all programmes offered during the year

162

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	<a href="#">View File</a>

### 1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

28

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	<a href="#">View File</a>

### 1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

In order to integrate the cross-cutting issues relevant to gender, environment and sustainability, human values, and professional ethics, the Institute has adopted several courses in the curriculum.

#### Gender Sensitivity

'Constitution of India' has been introduced as a compulsory course in first year of B.E to enable them to learn and practice the concepts of gender equality and social equality.

#### Environment and Sustainability issues

The course on 'Environmental Studies' is taught in all undergraduate programmes. The environmental club, 'Ramdeobaba College Engineers for Environment Forum (REEF)' makes students and faculty aware of the importance and ways of environmental protection. Students are encouraged for Swachh Bharat internship and are sensitized about the environment issues, through activities such as seminars, field excursions, and Earth Hour.

#### Human Values and Professional Ethics

Courses on 'Social Science', 'Psychology for Professional Growth', 'Employability skills for Engineers', 'Organizational Behaviour and Development', 'Ethics in IT', 'Contract Works Account and Management', 'Essence of Indian Traditional knowledge', 'Rural Technology', 'Rural Marketing', 'Engineering for Agriculture' are introduced in the curriculum. Human values and professional ethics form a core component of curriculum design and as a part of 'Technical Communication' course, students are made to understand the significance of ethics in technical writing.



File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

6

File Description	Documents
List of value-added courses	<a href="#">View File</a>
Brochure or any other document relating to value-added courses	<a href="#">View File</a>
Any additional information	No File Uploaded

### 1.3.3 - Number of students enrolled in the courses under 1.3.2 above

131

File Description	Documents
List of students enrolled	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 1.3.4 - Number of students undertaking field work/projects/ internships / student projects

2115

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<a href="#">View File</a>
Any additional information	No File Uploaded

## 1.4 - Feedback System

1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is

A. All 4 of the above

**obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni**

File Description	Documents
Provide the URL for stakeholders' feedback report	<a href="http://www.rknec.edu/Imp%20Links/Docs/StakeHolder%20Feedback/Stakeholders%20%20feedback%20%202020-21.pdf">http://www.rknec.edu/Imp%20Links/Docs/StakeHolder%20Feedback/Stakeholders%20%20feedback%20%202020-21.pdf</a>
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<a href="#">View File</a>
Any additional information	<b>No File Uploaded</b>

**1.4.2 - The feedback system of the Institution comprises the following**

**A. Feedback collected, analysed and action taken made available on the website**

File Description	Documents
Provide URL for stakeholders' feedback report	<a href="http://www.rknec.edu/Imp%20Links/Docs/StakeHolder%20Feedback/Stakeholders%20%20feedback%20%202020-21.pdf">http://www.rknec.edu/Imp%20Links/Docs/StakeHolder%20Feedback/Stakeholders%20%20feedback%20%202020-21.pdf</a>
Any additional information	<b>No File Uploaded</b>

## **TEACHING-LEARNING AND EVALUATION**

### **2.1 - Student Enrollment and Profile**

#### **2.1.1 - Enrolment of Students**

##### **2.1.1.1 - Number of students admitted (year-wise) during the year**

**1309**

File Description	Documents
Any additional information	<a href="#">View File</a>
Institutional data in prescribed format	<a href="#">View File</a>

**2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)**

527

File Description	Documents
Any additional information	<a href="#">View File</a>
Number of seats filled against seats reserved (Data Template)	<a href="#">View File</a>

## 2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

The Institute assesses the learning levels of the admitted students at entry level through Psychometric test . Students are grouped into different baskets and mentored by the faculty mentors. Later as the students' progress in the programme, academic performance in tests and discussions in the class forms the basis of identifying slow and advanced learners. Remedial classes/doubt solving sessions are organised after the regular class schedule for academically weak students. The Institute recognizes the need to adapt to the different learning levels of students and has introduced certain provisions in the regulations.

### Provisions for Fast Learners:

- (1) One Semester Internship in Industry/R&D Laboratories/Renowned Institutions for UG /PG students
- (2) One Semester, RCOEM Technology Business Incubation(TBI) Start-up Scheme for UG /PG students
- (3) Two Semester Internship in Industry/R&D Laboratories/Renowned Institutions for PG students
- (4) Credit Transfer Scheme for completion of one semester in other Institutions
- (5) Incentives for R&D/Incubation/ On-line Courses completed simultaneously with curriculum
- (6) Capability Linked Opportunities (Honors/Minor Certification)

### Provisions for Slow Learners:

1. Make-up Examination

2. Improvement of Grade/CGPA while undertaking a Programme
3. Forgo Continuous Assessment Marks
4. Improvement of Grade/CGPA after completion of Programme
5. Drop the course

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

### 2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
01/01/2021	4890	236

File Description	Documents
Upload any additional information	<a href="#">View File</a>

### 2.3 - Teaching- Learning Process

2.3.1 - Student-centric methods such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences:

The Institute focuses on student-centric methods to enhance learning experience . Faculty members take efforts in making the learning activity more interactive by adopting the contemporary pedagogical practices as mentioned below.

#### Pedagogical Practices

##### Teaching Methodology

##### Class Room Learning

1. Chalk and Talk method

2. PPTs/Multimedia

##### Experiential / Field Learning

1. Practical learning

2. Internships

4. Training programs

5. Case Studies

6. Guest lectures

7. Students participation in competitions

Problem solving Learning

1. Tutorial

2. Assignments

3. Quizzes

4. Research work

Participative Learning

1. Project

3. Group Discussions

4. Students' presentation

5. MOOC

Use of Google classroom, conduction of tutorials have ensured that students take an active part in the teaching-learning process. Effectively designed open-ended experiments are adopted. The students are also trained in virtual labs and modern simulation tools to enrich their experiential learning.

Independent learning is encouraged through assignments, seminars and self-study components.

Use of technology(MOOCs) for enhancing the learnability coefficient of the students is encouraged and incentives are awarded to the students.

Participative learning is encouraged through paper presentations, participation in technical events, and industry and research projects.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Link for additional Information	Nil

2.3.2 - Teachers use ICT-enabled tools including online resources for effective teaching and learning

100% faculty use ICT tools for teaching / academic and other purposes. Various ICT resources for effective teaching-learning utilized by faculty include video lectures, Google classroom, faculty web pages, faculty You tube Channels, etc. along with the institutes LMS - JUNO Campus. Please find the web links pertaining to different ICT tools used by the faculty in the table below:

S.No

Particular

Weblink

1.

Webpages +

You tube Channel

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-webpages+blog+channel.pdf>

1.

Video Lectures

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-Media-Center.pdf>

1.

ICT tools used (PPT, Blogs, Google forms, Quizzes, Slide player, Google slides, Google spreadsheets)

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-ICT-Tools-Used.pdf>

1.

**ICT Infrastructure**

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-ICT-Infrastructure.pdf>

1.

**Google classroom**

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-google-classroom.pdf>

1.

**LMS-JUNO-Link**

[www.rcoem.in](http://www.rcoem.in) Username- [naac@rknec.edu](mailto:naac@rknec.edu) password-Naac@1234

1.

**LMS Details**

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-LMS.pdf>

1.

**LMS Invoice**

<http://www.rknec.edu/AQAR/02/2.3/2.3.2/2.3.2-LMS-Invoice.pdf>

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	<a href="http://www.rknec.edu/AQAR/02/2.3/2.3.2/">http://www.rknec.edu/AQAR/02/2.3/2.3.2/</a>
Upload any additional information	<a href="#">View File</a>

**2.3.3 - Ratio of students to mentor for academic and other related issues**

**2.3.3.1 - Number of mentors**

233

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	<a href="#">View File</a>
Circulars with regard to assigning mentors to mentees	<a href="#">View File</a>

#### 2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

The academic calendar ensures uniformity in various academic and assessment procedures and process across all the departments of the institute and is framed at least 15-30 days prior to the start of the academic session for all UG & PG programmes. It includes all the important academic and co-curricular activities schedules. The academic calendar is prepared with necessary inputs from various stakeholders' including Deans , Controllers of Examination, and Heads of Departments of the Institute. The academic calendar is circulated to all the stakeholders and uploaded on the Institute website for reference to all the students.

In addition to the Institute level academic calendar, a department level academic calendar is also designed and followed. This calendar includes the activities planned at the department level, which may include co-curricular and schedules of various professional societies of the department. The adherence to the academic calendar is ensured by Head of Department and Dean Academics. Dean Academics seeks report with respect to activities involved in the academic calendar and ensure adherence to action items of the calendar. The Head of the Department also ensures adherence to teaching plans from time-to-time by seeking the necessary details from the faculty of the respective departments.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<a href="#">View File</a>

### 2.4 - Teacher Profile and Quality

#### 2.4.1 - Number of full-time teachers against sanctioned posts during the year

236



File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	<a href="#">View File</a>
List of the faculty members authenticated by the Head of HEI	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year**

137

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)**

2946

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<a href="#">View File</a>
Any additional information	No File Uploaded

**2.5 - Evaluation Process and Reforms**

**2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year**

5

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	<a href="#">View File</a>
Any additional information	No File Uploaded

**2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year**

29

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<a href="#">View File</a>
Upload any additional information	No File Uploaded

**2.5.3 - IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in the Examination Management System (EMS) of the Institution**

- **Examination procedures**

RCOEM has a well-established, completely automated and transparent evaluation process and it is communicated to all the stakeholders. Outcome based education has been implemented from 2011 since the inception of autonomy. RCOEM has adopted Revised Bloom's Taxonomy which provides an important framework to not only design curriculum and teaching methodologies but also to design appropriate examination questions belonging to various cognitive levels.

- **Processes/Procedures integrating IT**

The examination processes are completely automated. All the students are registered online through ERP. Examination forms are auto-filled. Hall tickets are printed by the student themselves through their ERP login. Online payment gateway facility is made available for the students for payment of fees. All the Examination Records are digitized. The results are processed online and students can access results through ERP login. Integration of IT in examination processes has made the examination system fast, efficient, transparent and error free.

- **Continuous Internal Assessment System**

Students are assessed on a continuous basis through traditional and innovative modes of assessments such as Open book examination, online quizzes, computer based testing etc. and relative grading system is implemented with CGPA for all the programmes. These assessment tools assess the various abilities and learning outcomes among the students.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	Nil

## 2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

The Institution has clearly stated programme outcomes (PO), program-specific outcomes (PSO), and course outcomes (CO) for all the programmes. The curriculum structure and syllabi for all the programmes are developed in a structured manner through a well-defined process that involves the participation of stakeholders' .

The Institute has an elaborate mechanism to effectively disseminate the information about POs, PSOs and COs amongst faculty and students, and are :

- Clearly displayed on the Institute website.
- Printed in the copy of syllabi which is given to all the students seeking admission to the first year of every programme.
- Prominently displayed in the office of Head of the Department and important locations of every department.
- Discussed in parent-teacher and employers' meet.
- Discussed by the course teacher with the students at the beginning of each course.
- Displayed as a screensaver on desktops and laptops in the concerned departments.
- Incorporated in the course file for each semester.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Link for additional Information	Nil

### 2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

The Institution ensures effective curriculum delivery based on best practices of pedagogy, evaluation and assessment to attain the POs as well as PSOs. Programme Assessment and Quality Improvement committee (PAQIC) defines the performance indicators and sets the target for POs and PSOs in the beginning of the academic year. At the start of every semester course coordinators sets the target for each CO attainment which is reviewed at the end of each semester by the course teachers and is further presented in the PAQIC meetings held every semester. At the end of each academic session, PAQIC meetings are held to understand the degree of PO and PSO attainment for the graduating batch of students and suggest remedial measures for the next academic year.

Both direct and indirect methods of assessment are used to ensure the attainment of POs.

The direct assessment tools include :

- Assignments
- Laboratory performance
- Student Project
- Internal Test Examinations
- End Semester Examinations

The indirect assessment tools include:

- Course End Survey
- Exit feedback
- Alumni Survey
- Employer Survey
- Co-curricular Activities
- Extracurricular Activities

Course Outcome/Programme Outcomes/Programme Specific Outcomes

attainment are calculated using direct and indirect assessment tools as per the defined procedure for each programme.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	Nil

### 2.6.3 - Pass Percentage of students

#### 2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

1339

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Paste link for the annual report	<a href="http://rknec.edu/COE/Examination%20Report/EXAMINATIONS%20REPORT%20Winter%202020.pdf">Winter-20 : http://rknec.edu/COE/Examination%20Report/EXAMINATIONS%20REPORT%20Winter%202020.pdf</a> <a href="http://rknec.edu/COE/Examination%20Report/EXAMINATIONS%20REPORTS%20Summer%202021.pdf">Summer-21:-http://rknec.edu/COE/Examination%20Report/EXAMINATIONS%20REPORTS%20Summer%202021.pdf</a>

### 2.7 - Student Satisfaction Survey

#### 2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

<http://www.rknec.edu/Imp%20Links/Docs/StudentSatisfacionSurvey2020-21.pdf>

## RESEARCH, INNOVATIONS AND EXTENSION

### 3.1 - Promotion of Research and Facilities

3.1.1 - The institution's research facilities are frequently updated and there is a well-defined policy for promotion of research which is uploaded on the institutional website and implemented

The Institute has taken up the challenge to create productive research culture, in the process of which notable exercises include:

#### 1. Incentives and Funding for Research

I) Financial incentives/support for students/faculty for paper publication , registration and travel for presenting papers in conferences (held in India and abroad), FDPs etc., filing of patents. Reimbursement of tuition fees for pursuing PhD from reputed institutes including RCOEM.

II) Provision for research funding:

- Young faculty Research fund (Seed Money)
- Department wise R&D budget.

#### 2. Policy Norms for Pursuing Higher Studies

Faculty pursuing Ph.D :Three months of full-salary or six months of half-salary study leave.

#### 3. Research Recognition Policy

Awards constituted:

- Researcher of the Year Award
- Young Researcher of the Year Award

#### 4. Academic Integrity and Prevention of Plagiarism Policy

The policy lists the responsibility of faculty, staff and student towards academic integrity and provides the mechanism to deal with plagiarism.

#### 5. Research facilities:

I) Different research-oriented laboratory facilities in each department and is regularly updated.

II) Central fabrication facilities and centres of excellence: RCOEM-TATA CIIIT, NVIDIA Centre of Excellence in Artificial Intelligence and Deep learning, Intellisense Centre for Microsystems, RCOEM-QCFI Centre of Human Excellence, Energy Research centre .

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<a href="#">View File</a>
Provide URL of policy document on promotion of research uploaded on the website	<a href="http://www.rknec.edu/R%20and%20D/Docs/2019/R&amp;D%20Policy.pdf">http://www.rknec.edu/R%20and%20D/Docs/2019/R&amp;D%20Policy.pdf</a>
Any additional information	<a href="#">View File</a>

### 3.1.2 - The institution provides seed money to its teachers for research

#### 3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

32.55

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	<a href="#">View File</a>
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	<a href="#">View File</a>
List of teachers receiving grant and details of grant received	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

4

File Description	Documents
e-copies of the award letters of the teachers	<a href="#">View File</a>
List of teachers and details of their international fellowship(s)	<a href="#">View File</a>
Any additional information	No File Uploaded

### 3.2 - Resource Mobilization for Research

#### 3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

117.54433

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non-governmental agencies/organizations	<a href="#">View File</a>
List of projects and grant details	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

#### 3.2.2 - Number of teachers having research projects during the year

14

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	Nil
List of research projects during the year	<a href="#">View File</a>

#### 3.2.3 - Number of teachers recognised as research guides

58

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<a href="#">View File</a>
Institutional data in Prescribed format	<a href="#">View File</a>

#### 3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year

6



File Description	Documents
Supporting document from Funding Agencies	<a href="#">View File</a>
Paste link to funding agencies' website	<a href="https://www.aicte-india.org/">https://www.aicte-india.org/</a>
Any additional information	<a href="#">View File</a>

### 3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

The Institute has pioneered the incubation of innovative ideas through RCOEM Technology Business Incubators Foundation( RCOEM-TBI), a section 8 company.

Salient features of Innovation Ecosystem:

- Dedicated Incubation facilities of 8000+ sq.ft consisting of office, co-working space, conference room, product design & training lab.
- Nurturing 17 ideas and startups in Manufacturing, Service IT and ICT , Food and Agriculture sector
- Seed funding provision of Rs.25 lakhs for proof of concept(POC) and product launch to six startups in FY 2020-21,
- 5 ideas are commercialized, 5 in product launch stage and 7 in POC stage.
- Establishment of 6 Center of Excellence(CoE)
  - RCOEM TATA CIIIT
  - RCOEM MSME ASPIRE Innovation Center
  - Nvidia -AI-ML Center
  - Center for Microsystemswith Intellisense
  - Energy Research Center
  - QCFI- CoE in Human Excellence
- Access to 10+ laboratories for design, development and prototyping , testing facilities sponsored by the industries i.e. Fablab, MakerSpace etc.
- Patent & IP Cell provides assistance for prior art searches, defining claims and patent disclosures of inventions.
- 80+ Industry partners, Industry associations provides support

and mentorship.

- Global Mentor and Investor Network and formal engagements with Serial entrepreneurs, VC firms.
- Support for students to ideate, inculcate design thinking, build business plans and pitch, startup internship programs etc.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/IncubationCell.aspx">http://www.rknec.edu/IncubationCell.aspx</a>

### 3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

67

File Description	Documents
Report of the events	<a href="#">View File</a>
List of workshops/seminars conducted during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

### 3.4 - Research Publications and Awards

**3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research methodology course work Plagiarism check through authenticated software**

A. All of the above

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year**

**3.4.2.1 - Number of PhD students registered during the year**

0

File Description	Documents
URL to the research page on HEI website	<a href="http://www.rknec.edu/R%20and%20D/DoctoralPrograms.aspx">http://www.rknec.edu/R%20and%20D/DoctoralPrograms.aspx</a>
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year**

157

File Description	Documents
List of research papers by title, author, department, and year of publication	<a href="#">View File</a>
Any additional information	No File Uploaded

**3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year**

37

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

**3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed**

**3.4.5.1 - Total number of Citations in Scopus during the year**

3753

File Description	Documents
Any additional information	No File Uploaded
Bibliometrics of the publications during the year	<a href="#">View File</a>

### 3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

#### 3.4.6.1 - h-index of Scopus during the year

27

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 3.5 - Consultancy

#### 3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

0.82877

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	<a href="#">View File</a>
List of consultants and revenue generated by them	<a href="#">View File</a>
Any additional information	No File Uploaded

#### 3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

177.33696

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	<a href="#">View File</a>
List of training programmes, teachers and staff trained for undertaking consultancy	<a href="#">View File</a>
List of facilities and staff available for undertaking consultancy	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

The Institute promotes extension activities with a dual objective of not only sensitizing students about various social issues but also contribute to community and strengthen community participation.

#### BLOOD AND PLASMA DONATION DRIVE

The NSS Unit in collaboration with Dr. Hedgewar Blood Bank, Organised an awareness Campaign about the importance of blood and plasma donation through social media platforms during May 6-15,2021.This resulted in 14 registrations for plasma donation and 85 for blood donation.

#### ROAD SAFETY AWARENESS CAMPAIGN

A webinar on road safety was conducted by NSS Unit on 16th February 2021, delivered by the Police Inspector In-charge at Cyber Police on the occasion of "National Road Safety Month". Thereafter students organized a campaign to spread awareness of road safety precautions at different traffic signal locations across the city.

#### BLANKET DONATION

The NSS unit on the Republic Day celebration donated blankets. In total 114 blankets were donated to needy people by Students.

**CONTRIBUTION DURING COVID-19 PANDEMIC**

The NSS volunteers on an individual level distributed Food, Mask, Sanitizer, Groceries, and medical kit to needy people. The contribution was made to PM Relief Fund by students voluntarily.

**VACCINATION AWARENESS DRIVE:**

Vaccination awareness through posters was conducted through social media platforms.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Students/nss.aspx">http://www.rknec.edu/Students/nss.aspx</a>

**3.6.2 - Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government-recognised bodies during the year**

**74**

File Description	Documents
Number of awards for extension activities in during the year	<a href="#">View File</a>
e-copy of the award letters	<a href="#">View File</a>
Any additional information	No File Uploaded

**3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)**

**32**

File Description	Documents
Reports of the events organized	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year**

**3173**

File Description	Documents
Reports of the events	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 3.7 - Collaboration

#### 3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work

742

File Description	Documents
Copies of documents highlighting collaboration	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

#### 3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

38

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<a href="#">View File</a>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

## INFRASTRUCTURE AND LEARNING RESOURCES

### 4.1 - Physical Facilities

4.1.1 - The Institution has adequate infrastructure and physical facilities for teaching-learning, viz., classrooms, laboratories, computing equipments, etc.

RCOEM campus is spread over 16.77 acres of land. The description of the facilities is as under:

Sr. No.

Type

Actual Room

Area in Sq. m.

Expected Area As per AICTE in

Sq. m.

1

Administrative area

2584

700

2

Amenities Area

2213.16

740.00

3

Instructional Area-Common Facilities

3326

1992

4

Total Area

52609.1

10117.1

Engineering and Technology

1



**Class Room-Tutorial Room**

3526

2244

2

**Additional Workshop/Labs**

609

200

3

**Class Rooms - PG**

482

297

4

**Laboratories-All**

6828

4554

5

**Workshops - Basic**

410

400

6

**Drawing Hall**

427

264

7

Seminar Hall

1442

132

Management

1

Class Room-Tutorial Room

794

297

2

Computer Laboratory

249

66

3

Seminar Hall

484

132

Computer Application (MCA)

1

Class Room-Tutorial Room

255

231

2

**Computer Laboratory**

160

132

3

**Seminar Hall**

156

132

There are 8 academic blocks consisting of 63 ICT-enabled classrooms, 6 seminar halls, air-conditioned auditoriums, 92 state of art laboratories, COE , RCOEM Accenture Innovation Centre, Incubation center and central & department library. The campus is Wi-Fi enabled with bandwidth of 600 Mbps.

Mass Communication Studios(Media centre), Language laboratory form a part of modern teaching facilities with robust MIS system taking care of all academic and administrative processes.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

4.1.2 - The institution has adequate facilities for cultural activities, yoga, sports and games (indoor and outdoor) including gymnasium, yoga centre, auditorium etc.)

Adequate facilities exist for the conduction of indoor and outdoor games .There is a separate gymnasium for boys and girls in the hostel. The Institute has also established a separate sports complex at Dorli, Katol road, Nagpur with an area of 43 Acres which includes facilities for outdoor sports including Cricket, Football, Basketball, Volleyball and Athletics etc. The details of the sports and recreational facilities are as under:

Sports (Indoor/Outdoor)

Indoor/

Outdoor

Name of Game

AREA / Specification (Sq. Mt.)

EQUIPMENT/FACILITIES

Indoor

Table tennis,

Chess, Carom

152

TT- Tables, Chess and Carom boards

Gymnasium (boys)

302

Tread Mill, Elliptical Trainer, Peddlers etc.

Gymnasium (girls)

37

Tread Mill, Elliptical Trainer, Peddlers etc.

Outdoor

Volleyball

1,056

Volleyball court(In Campus)

**Basketball**

1042

1185

Basketball court(In Campus)

Basketball court(Sports Complex)

**Cricket**

1250

24, 762

Practice Pitches(In Campus)

Three Turf Pitches and ground with international standard

**Football**

1,560

9,360

Five a Side Ground(In Campus)

Standard football ground

**Athletic Track**

19,357

Standard 400 meter track(8 lane)

Yoga Centre Facility

Sr. No.

Facility

Specification (Area in Sq.mt)

1

Yoga Centre

302.66

Physical Infrastructure for Cultural Activites:

Sr. No.

Facility

Specification (Area in Sq.mt)

1

Lawn with Stage

4500

2

Auditorium

437.43

3

Open Air Theatre(OAT)

192sq.m

File Description	Documents
Geotagged pictures	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Students/SportsActivities.aspx">http://www.rknec.edu/Students/SportsActivities.aspx</a>

#### 4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

69

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<a href="#">View File</a>

#### 4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

408.92

File Description	Documents
Upload audited utilization statements	<a href="#">View File</a>
Details of Expenditure, excluding salary, during the years	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

#### 4.2 - Library as a Learning Resource

##### 4.2.1 - Library is automated using Integrated Library Management System (ILMS)

- Name of the ILMS software :JUNO CAMPUS
- Nature of automation (full or partial):Full
- Version :GEMS\_52208 JUNO CAMPUS-5.4.2(Android App)
- Year of automation :Since 2001the library activities were automated on the System for Library Information and Management (SLIM). From 2014 onwards, it has been upgraded

### on MIS software - JUNO CAMPUS

The Central Library is housed in an area spanning over 1340.33 sq.m. with a seating capacity of 174 users. It has a collection of more than 22,000 titles and 97,000 volumes of resources like books, handbooks, abstracts, standards, project reports & thesis etc. on subjects including Engineering, Management & Social Sciences etc. and subscribesto e-journals like ASME, ASCE, EBSCO e-journals, Science Direct, Springer, Scopus, EBSCO e-book, NPTEL video lecture & DELNET.

JUNO CAMPUS is deployed on a cloud server with some of the features as below:

#### CATALOGING

- Import Bibliographic data, Supports all material types
- Attach digital content with catalog record
- Search catalog
- Technical Processing

#### CIRCULATION

- Check -out(Issues)
- Check-in>Returns)
- Emails &SMS facility

#### WEB OPAC

- Various types of searches.
- Reserve & cancel items online.
- List of new arrivals.

#### REPORTS

- Accession register
- List of titles
- Stock verification
- Detailed Circulation Transaction
- Users List
- Daily attendance
- Current arrivals
- Generate Purchase Order and Online payment



File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Academics/Library/CentralLibrary.aspx">http://www.rknec.edu/Academics/Library/CentralLibrary.aspx</a>

**4.2.2 - Institution has access to the following:  
e-journals e-ShodhSindhu Shodhganga  
Membership e-books Databases Remote  
access to e-resources**

**A. Any 4 or more of the above**

File Description	Documents
Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga membership	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

**4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)**

**41.23**

File Description	Documents
Audited statements of accounts	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	<a href="#">View File</a>

**4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)**

**4.2.4.1 - Number of teachers and students using the library per day during the year**

**267**

File Description	Documents
Upload details of library usage by teachers and students	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

The campus is Wi-Fi enabled with a Wi-Fi controller, secured through a UTM firewall and is hosted through RADIUS server/MAC authentication. The Institute's VLAN network is equipped with high-end core switches (D-Link DGS3620-28SC), distribution switches (D-Link DGS 1500-28/1510-28), and access switches in various departments.

The Institute internet gateway is protected with UTM Firewall (Sophos SG450 full guard licence). To cater for the increasing need for computing facilities, in the year 2020-21 it was further increased to 600 Mbps from BSNL and Tata Teleservices.

The Institute has a total number of 1687 desktops exclusively for student use in the year 2020-2021. The Institute has 1300 licensed system software. Realizing the importance of soft skills for technocrats, the department of Humanities hosts a language laboratory that is equipped with 41 computers, an overhead projector and licensed language learning software.

The classrooms, seminar halls, conference halls are ICT enabled. The up-gradation of IT facilities are carried out periodically. The Institute annually purchases and/or upgrades/replace the computing hardware as per the requirement. The Institute has a dedicated central computer centre with seating capacity of 100. Every department has a computer centre/laboratory to cater to the specific requirements of the teaching-learning process.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/MIS/CNC.aspx">http://www.rknec.edu/MIS/CNC.aspx</a>

### 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
4890	1687

File Description	Documents
Upload any additional information	<a href="#">View File</a>

<b>4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus</b>	A. 750 Mbps
---	-------------

File Description	Documents
Details of bandwidth available in the Institution	<a href="#">View File</a>
Upload any additional information	No File Uploaded

<b>4.3.4 - Institution has facilities for e-content development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing</b>	A. All four of the above
--	--------------------------

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://rknec.edu/Imp%20Links/MediaCenter.aspx">http://rknec.edu/Imp%20Links/MediaCenter.aspx</a>
List of facilities for e-content development (Data Template)	<a href="#">View File</a>

#### 4.4 - Maintenance of Campus Infrastructure

##### 4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

779.25

File Description	Documents
Audited statements of accounts	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

4.4.2 - There are established systems and procedures for maintaining and utilizing physical,

academic and support facilities – classrooms, laboratory, library, sports complex, computers, etc.

The Administrative Officer and Chief Maintenance Officer of the Institution are responsible for the maintenance of the physical, academic and support facilities. The Institute has an in-house team for undertaking routine computer, website, solar panel, MIS maintenance activities and private agency 'Dust Blower' for the cleaning of entire campus. Electrical Maintenance In-charge and their team take care of the requests for electrical maintenance work put online through MIS . The maintenance of water supply systems, buildings, Sewage Treatment Plant (STP), rain water harvesting structures, etc. are carried periodically. Library: The Librarian manages the working of the central library. A fully automated air- conditioned library and its digital section is maintained by Computer Network Centre.

Laboratory: The laboratory in-charge manages laboratories along with the technical assistant. Yearly stock verification is done by the administrative officer and equipment are identified for repair / write-off purpose.

Sports: Physical education department manages the sports section and staff maintains open play ground and gymnasiums.

Computers section: The maintenance of all the computers is done by central networking and computing department following standard procedures.

Other academic facility: The building supervisor and construction department is responsible for the maintenance of the buildings and physical facilities including washrooms.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Imp%20Links/CertificationofRegistrationISO.aspx">http://www.rknec.edu/Imp%20Links/CertificationofRegistrationISO.aspx</a>

## STUDENT SUPPORT AND PROGRESSION

### 5.1 - Student Support

#### 5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

2114

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

**5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year**

457

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Institutional data in prescribed format	<a href="#">View File</a>

**5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology**

**A. All of the above**

File Description	Documents
Link to Institutional website	<a href="http://www.rknec.edu/Academics/Departments/Enggdept.aspx">http://www.rknec.edu/Academics/Departments/Enggdept.aspx</a>
Details of capability development and schemes	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year**

2292

File Description	Documents
Any additional information	<a href="#">View File</a>
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<a href="#">View File</a>

<b>5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees</b>	<b>A. All of the above</b>
---	----------------------------

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	<a href="#">View File</a>
Details of student grievances including sexual harassment and ragging cases	<b>No File Uploaded</b>
Upload any additional information	<a href="#">View File</a>

**5.2 - Student Progression**

**5.2.1 - Number of outgoing students who got placement during the year**

**999**

File Description	Documents
Self-attested list of students placed	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

**5.2.2 - Number of outgoing students progressing to higher education**

39

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Details of students who went for higher education	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year**

**5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year**

196

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**5.3 - Student Participation and Activities**

**5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year**

22

File Description	Documents
e-copies of award letters and certificates	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution**

**1. Students' Representative Council (SRC): SRC is functioning actively in accordance with the guidelines led down by the Government of Maharashtra University's Act 1994.**

**2. Student representation in Academic bodies:**

- Internal Quality Assurance Cell(IQAC): Two undergraduate students and one post-graduate student are nominated on IQAC.
- Unfair means Committee: This committee has one student member nominated by SRC.

**3.Student representation in Administrative committees:**

- College Development Committee(CDC): The Cultural Secretary of the SRC is a member of CDC.
- Hostel &Mess Committee: Students are involved in the hostel committee as a prefect and are involved in the Mess administration.
- Women Empowerment Cell(WEC): One girl student representative is nominated to WEC.
- Anti-ragging committee: Two student representatives (one girl and one boy) are nominated on Anti-ragging committee.
- Internal Complaint Committee(ICC): One student each from undergraduate, postgraduate and Ph.D. programmes is nominated as a member of ICC.
- Equal Opportunity Cell: Secretary Student council is nominated as the member of this cell.

**4.Student representation in department/professional societies/ Training & Placement(T&P):**

Every department forms student's society which is actively involved in organizing different activities leading to overall personality development. Students are also members of professional society student's forum like IEEE, CSI, IIIE etc and T&P committee.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Students/SRC/Docs/SRC%20Annual%20Report%202020-21.pdf">http://www.rknec.edu/Students/SRC/Docs/SRC%20Annual%20Report%202020-21.pdf</a>

**5.3.3 - Number of sports and cultural events / competitions organised by the institution**

22



File Description	Documents
Report of the event	<a href="#">View File</a>
List of sports and cultural events / competitions organised per year	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

## 5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

The RCOEM Alumni Association is registered under section 8(1) of the companies act, 2013 and is spread across the globe having its chapters in U.S.A, U.K, Singapore, Middle East and in major cities of India including New Delhi, Mumbai, Pune, Bangalore, Jaipur, Hyderabad, Chennai, and Kolkata. It plays active part in the institutional ecosystem through the following activities:

- Participation in curriculum development as member of Board of Studies (BOS).
- Providing opportunities for placement, internship , industry visit and guidance to the budding entrepreneurs in collaboration with Technology Business Incubation center(TBI)
- Providing scholarships and donations towards student welfare.
- Organization and delivery of guest lectures on emerging technologies, career guidance, counseling, and awareness regarding higher education in India and abroad.
- Providing quality inputs for the overall development of the Institute through IQAC, College Development Committee(CDC).

The Annual Alumni Newsletter 'Reminiscence' highlights the contributions and activities of Alumni.

One of the alumni has Instituted a scholarship for students with an outlay of Rs. 30,00,000 (Thirty Lacs)

The Alumni of RCOEM have taken a novel initiative to support students by paying full/partial fees for economically weaker but meritorious students by creating a fund at RCOEM known as "Students' Welfare Fund".

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.rknecalumni.org/admin_dashboar d.dz">https://www.rknecalumni.org/admin_dashboar d.dz</a>

**5.4.2 - Alumni's financial contribution during the year**

C. 5 Lakhs - 10 Lakhs

File Description	Documents
Upload any additional information	<a href="#">View File</a>

**GOVERNANCE, LEADERSHIP AND MANAGEMENT**

**6.1 - Institutional Vision and Leadership**

6.1.1 - The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

The governance of the Institute is reflective of responsive leadership reinforcing a culture of excellence in line with the vision and mission of the Institute focusing on the areas of teaching, research, industry engagement and societal service. RCOEM leadership is involved in ensuring the Institute's management system development, implementation and continuous improvement through strong interaction with all its stakeholders with regard to the aspects as formulated in the perspective plan. Academic Advisory Board chaired by Padma Vibhushan Dr. Anil Kakodkar guides the Institution towards achieving its mission.

Decision making is aided by extensive consultation with faculty who are members of Board of Management, Academic Council, Board of Studies, College Development Committee, Staff Selection Committee, IQAC, Finance Committee and other statutory bodies and committees and thus are able to contribute in a significant way to the participatory ethos of the institution. The outcome of effective leadership has resulted in sustaining quality education and is evident from the recognitions gained from the society i.e. NIRF ranking, CSR and Outlook survey.

The new strategic plan development is initiated in view of NEP2020 and in context of the acceptance of the proposal for self financed university involving all stakeholders.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://www.rknec.edu/About/Vision-Mission.aspx">http://www.rknec.edu/About/Vision-Mission.aspx</a>

6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

The Institution has a practice of participative management providing equal opportunity to all participating in the decision making process.

The case study related to such participative management is stated as follows:

1. Academic Planning/Start of new programmes: The generous freedom and flexibility exist to the Principal together with the Heads of various departments to lead all the academic activities of the Institute and take necessary steps to implement the perspective plan of the Institution .This is evident through the proposal of new undergraduate/post graduate programmes (to be started from 2020-21) introduced in the emerging areas proposed by Academic Performance Evaluation Committee(APEC) after reviewing the existing programs (UG+PG) with regard to graduate outcomes. The proposal was subsequently discussed in meeting of concerned Heads of departments by Chairman APEC, chaired by Principal. After approval from the concerned Heads of department, the proposal was further approved by Academic Council and Board of Management .

2. Financial budget planning: This process uses a roll-up approach where the individual departments in consultation with the faculty work from the bottom-up to recommend needs and propose department budget for carrying out academic and research activities which is finally approved by the Finance Committee.

File Description	Documents
Upload strategic plan and deployment documents on the website	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://www.rknec.edu/Docs/Important%20Documents/RCOEM%20Perspective%20Plan.pdf">http://www.rknec.edu/Docs/Important%20Documents/RCOEM%20Perspective%20Plan.pdf</a>

## 6.2 - Strategy Development and Deployment

6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

With reference to the effective implementation of the perspective plan in general and theme No.1 in specific whose objective is to attract motivated academic achievers and nurture them into skilled technical and managerial workforce, the following are the deployment details:

Tangible actions towards ecosystem creation:

- New Under Graduate(UG) and Post Graduate(PG) programmes(with CBCS) in emerging and inter /cross disciplinary areas
- Involvement of industry experts in curriculum design and Co-teaching
- Enrichment of laboratories and Centers of Excellence
- Training programs and provision of internships for students to transform into an employable workforce
- Scholarships for academic toppers,excellence in research, sports,cultural activities,and higher studies.

Outcomes:

- Start of four undergraduate programmes and one postgraduate programme in the emerging areas
- Four undergraduate programmes and one postgraduate programme curriculum framed in consultation with various industries, more than 20 industries involved in co-teaching and course content revision.
- Infrastructure upgradation, 06 training programs conducted by RCOEM faculty,17 training programs conducted in association with various industries, research internships offered to more than 45 students, grant of around Rs.6 lakh received for conducting training programs, and research.

- 456 students benefitted from the scholarships awarded for academic toppers, excellence in research, sports, cultural activities and higher studies amounting to Rs 26,08,050/-

File Description	Documents
Strategic Plan and deployment documents on the website	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Docs/Important%20Documents/RCOEM%20Perspective%20Plan.pdf">http://www.rknec.edu/Docs/Important%20Documents/RCOEM%20Perspective%20Plan.pdf</a>
Upload any additional information	<a href="#">View File</a>

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

The roles and responsibilities of various bodies/committees are distinct and the organizational structure includes following bodies:

#### Areas

#### Name of the Bodies/Officials/Committees

#### Planning, Implementation and Review

Board of Management (BoM)

Principal

Finance Committee

Steering Committee

Staff Selection Committee

Dean-Second Shift

Deans

Administration and Finance

Registrar

Finance Officer

Administrative Officer

Hostel Wardens

Academic Development,

Implementation and Evaluation

Academic Council

Controller of Examinations

Head of the Departments

Board of Studies (BOS)

Programme Assessment and Quality Improvement Committee (PAQIC)

Quality Maintenance and Sustenance

IQAC

ISO

Ranking and Accreditation

NIRF

NBA

NAAC

Committees as per UGC/ AICTE/ Govt Guidelines

- Grievance Redressal Committee
- Examination Committee
- Admission Committee
- Library Committee
- Students Welfare and Counselling Cell
- Internal complaints committee
- Anti-Ragging Committee
- Academic Audit Committee
- Equal opportunity Cell
- Woman Empowerment Cell

**Other institutional Committees and Cells**

- Central Research Review Committee
- Seed Money Proposal Evaluation Committee
- Research Advisory Committee
- Supervisor Allocation Committee
- Central Training and Placement Committee
- Internal Complaint Committee

Service Rules, Promotion Policies are as per UGC / State Government norms. In addition, the Institute has adopted the service conditions as per Ordinance 24 of RTMNU for faculty and Maharashtra Civil Services rules for supporting staff.

File Description	Documents
Paste link to Organogram on the institution webpage	<a href="http://www.rknec.edu/About/Administration/College.aspx">http://www.rknec.edu/About/Administration/College.aspx</a>
Upload any additional information	No File Uploaded
Paste link for additional Information	<a href="http://www.rknec.edu/Registrar%20office/RegistrarOffice.aspx">http://www.rknec.edu/Registrar%20office/RegistrarOffice.aspx</a>

**6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination**

A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	<a href="#">View File</a>
Screen shots of user interfaces	<a href="#">View File</a>
Details of implementation of e-governance in areas of operation	<a href="#">View File</a>
Any additional information	No File Uploaded

**6.3 - Faculty Empowerment Strategies**

6.3.1 - The institution has effective welfare measures for teaching and non-teaching staff and avenues for their career development/ progression

The significant welfare measures are listed below:



- Employees/Voluntary Provident Fund (EPF/VPF)
- Mediclaim
- Gratuity
- Maternity Leave
- Study Leave
- Ph.D fee reimbursement
- Earn Leave Encashment for supporting staff
- 50% concession in fee for support staff wards studying in Institute

Apart from the above, the provision for career advancement scheme, financial incentives for research publications, Registration fees and travel allowance for faculty attending conferences and workshops is also in place. SRKNEC staff credit co-operative society Ltd provides the term insurance of Rs. 10 lakh to every employee. Premium for Rs.5 lakhs is contributed by society while the premium for remaining Rs.5 lakhs is paid by employee.

Other amenities include on campus bank, canteen, ATM, separate parking for staff, sports, gymnasium etc.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rkneec.edu/Registrar%20office/RegistrarOffice.aspx">http://www.rkneec.edu/Registrar%20office/RegistrarOffice.aspx</a>

**6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year**

6

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<a href="#">View File</a>

**6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year**

30

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

**6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)**

**138**

File Description	Documents
Summary of the IQAC report	<a href="#">View File</a>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<a href="#">View File</a>
Upload any additional information	No File Uploaded

**6.4 - Financial Management and Resource Mobilization**

**6.4.1 - Institution conducts internal and external financial audits regularly**

The Institute has adopted transparent policy with regards to external and internal financial audit. The internal audits are carried out monthly. The verification is carried out on the following areas and the report is submitted to the Principal and Management.

- Cash vouchers
- Bank Vouchers
- Ledger
- Payroll
- Trail Balance
- Payroll
- Journal Vouchers

The compliance report based on the observations of the internal auditor if any, is submitted to the Steering committee. The details of the auditing agency are as given below:

**Internal Financial Audit**

**Financial Year**

**Agency**

**Frequency**

2020-21

M/s Loya Bagris Co.

Monthly

External audit is also regularly carried out on yearly basis. Compliance on observations, if any, made in the audit reports are promptly carried out by Finance Officer and are communicated to the Management, for subsequent submission to statutory auditor. The details of the auditing agency are as given below:

**External Financial Audit**

**Financial Year**

**Agency**

**Frequency**

2020-21

M/s S. D. Paranjpe and Co.

Yearly

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.rknec.edu/Finance%20office/FinanceOffice.aspx">http://www.rknec.edu/Finance%20office/FinanceOffice.aspx</a>

**6.4.2 - Funds / Grants received from non-government bodies, individuals, and philanthropists during the year (not covered in Criterion III and V) (INR in lakhs)**

0

File Description	Documents
Annual statements of accounts	No File Uploaded
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	No File Uploaded
Any additional information	No File Uploaded

6.4.3 - Institutional strategies for mobilisation of funds and the optimal utilisation of resources

RCOEM is a self-financed autonomous Institute and the important source of financial mobilization is annual tuition fees collected from the students strictly as approved by fee regulatory authority of Government of Maharashtra. Additional funding is obtained by encouraging faculty to prepare and submit research projects to various funding agency so that the the Institute can not only enrich itself in the terms of quality research but can also mobilize some funds for the research and laboratory development. The Institute has a policy of sharing the revenue generated through consultancy assignments with the faculty members which in turn also improves the content delivery apart from the generation of funds.

The Institute adheres to utilization of budget approved for academic and administrative expenses and follows the defined process and is financially self sustained. The transparent financial practices are hallmark of the Institution. It is committed to make optimal utilization of financial resources by promoting augmentation of physical infrastructure, academic and research excellence and enhancement of human and technical services. The recurring expenses are minimized through the adoption of green practices which include use of LED's, solar energy, effective recycling of waste, use of MIS as a step towards paperless office etc.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	Nil

## 6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

**IQAC has contributed significantly to institutionalizing the quality assurance strategies and processes and in developing quality benchmarks thereby aiding towards effective implementation of perspective plan to achieve the vision of the Institute. Following two practices have been institutionalized during 2020-21:**

**1. Quality objective parameter targets: Benchmarking of quality objective parameters helped the department to introspect and endeavour to reach out to the targeted levels. This has given them a right impetus to improve the quality of their publications, reach out for collaboration, research grants, consultancy, IPR, Training programs, value added courses, placement etc.**

**2. Implementation of AICTE environment Policy 2020: With the policy of AICTE to include environment conservation in decision making at all levels by stakeholders, IQAC initiated the practice of promoting green initiatives and encouraging students to contribute towards environment conservation by awarding incentive marks. The scheme for award of incentive marks was further approved by Academic Council.**

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

**The two examples of institutional reviews and implementation of teaching-learning reforms are:**

**Monitoring and redefining the teaching and evaluation process during COVID -19: IQAC reviewed the teaching learning process during Covid-19 and discussed the various challenges faced by students, faculties and the related technological hurdles.**

Chairman ,IQAC directed APEC to seek feedback from all stakeholders and formulate guidelines for execution of effective online teaching and evaluation process. The guidelines framed by APEC was approved and practiced by all the departments of the Institution.

Refinement in implementation of OBE: IQAC periodically reviews the attributes that are achieved by graduates and it was observed that the process adopted by the Institution necessitates refinement to get the intended results after the implementation of OBE. Suggestions in the implementation of the OBE based on the courses in NPTEL by NITTR on NBA accreditation were proposed. Workshop to understand and experience OBE framework was conducted under IQAC for NBA coordinators of all departments and PG coordinators of all programmes. Based on the recommendations in IQAC meeting , it was decided to prepare a booklet stating the procedure adopted in implementing OBE at the Institution .

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

**6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)**

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	<a href="http://www.rknec.edu/Imp%20Links/Docs/Annual%20Report/Final%202020-21%20Annual%20Report.pdf">http://www.rknec.edu/Imp%20Links/Docs/Annual%20Report/Final%202020-21%20Annual%20Report.pdf</a>
Upload e-copies of accreditations and certification	<a href="#">View File</a>
Upload details of quality assurance initiatives of the institution	<a href="#">View File</a>
Upload any additional information	No File Uploaded

## INSTITUTIONAL VALUES AND BEST PRACTICES

### 7.1 - Institutional Values and Social Responsibilities

#### 7.1.1 - Measures initiated by the Institution for the promotion of gender equity during the year

The Institute's unique work culture, healthy traditions have led to the enrolment of 68% women students and 49% women staff approximately. Safety, security, and well-being, along with gender equity and a friendly working atmosphere are the issues of prime concern. The curriculum includes a course on 'Constitution of India' which has enabled students to learn and practice the concepts of gender equality and social equality. Concepts of industrial democracy, responsive and responsible bureaucracy, peaceful coexistence, the value of cooperation and egalitarian transformation of Indian society form a part of the course curriculum.

The gender equity promotion initiatives include Women Health awareness program, Female Self Défense workshop, Sanitation and Hygiene for female, Financial Planning Workshop, My Story Session of Women Entrepreneur, Cyber Security for female non-teaching and teaching staff. Orientation programs for sensitizing students at entry-level, Self-defence, Sanitation, Hygiene, and Cyber security webinars were also conducted to create awareness amongst students. Specific facilities provided for women in safety and security include common rooms, Sanitary napkin vending machines, 151 CCTV cameras, and deployment of 33 security guards and 3 supervisors under the leadership of the lady officer of the rank of former Assistant Commissioner of Police.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	Nil

<b>7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/ power-efficient equipment</b>	<b>A. Any 4 or All of the above</b>
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File Description	Documents
Geotagged Photographs	<a href="#">View File</a>
Any other relevant information	No File Uploaded

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

**1) Solid Waste Management**

It consists of the collection, transportation, treatment, disposal of waste, and the use of the value-added product generated through the waste treatment. Vermicompost is produced on the campus using horticulture waste. All the dry leaves are collected in a specially designed pit measuring 12'x 3'x2'. Every three months, around 20 kg of vermicompost is produced which is utilized as fertilizer.

**2) Liquid Waste Management and Recycling of Waste Water**

A 200 KL/D advanced waste treatment plant, Moving Bed Biological Reactor (MBBR), is constructed. The MBBR is efficient, effective, compact, and easy to operate. The liquid waste generated on the campus is supplied to the MBBR unit which gets filtered through a series of filter beds and clear water is obtained. The treated water is then chlorinated and used for gardening, toilet flushing, and other such purposes. The sludge is used in gardening as good manure.

**3) e-waste Management**

Bins are provided in the laboratories of each department to



collect the e-waste. The collected material is disposed of for recycling through authorized vendors. The Institute takes the services of thee-collectors and e-recyclers for the effective management of e-waste. "Ayushi computers Nagpur" have been providing services for the same.

File Description	Documents
Relevant documents like agreements/MoUs with Government and other approved agencies	<a href="#">View File</a>
Geotagged photographs of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus**

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**7.1.5 - Green campus initiatives include**

**7.1.5.1 - The institutional initiatives for greening the campus are as follows:**

1. Restricted entry of automobiles
2. Use of bicycles/ Battery-powered vehicles
3. Pedestrian-friendly pathways
4. Ban on use of plastic
5. Landscaping

A. Any 4 or All of the above

File Description	Documents
Geotagged photos / videos of the facilities	<a href="#">View File</a>
Various policy documents / decisions circulated for implementation	<a href="#">View File</a>
Any other relevant documents	No File Uploaded

**7.1.6 - Quality audits on environment and energy undertaken by the institution**

<p><b>7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:</b></p> <ol style="list-style-type: none"> <li><b>1. Green audit</b></li> <li><b>2. Energy audit</b></li> <li><b>3.Environment audit</b></li> <li><b>4.Clean and green campus recognitions/awards</b></li> <li><b>5.Beyond the campus environmental promotional activities</b></li> </ol>	<p><b>A. Any 4 or all of the above</b></p>
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File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	<a href="#">View File</a>
Certification by the auditing agency	<a href="#">View File</a>
Certificates of the awards received	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

<p><b>7.1.7 - The Institution has a disabled-friendly and barrier-free environment: Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance,</b></p>	<p><b>A. Any 4 or all of the above</b></p>
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reader, scribe, soft copies of reading materials, screen reading, etc.

File Description	Documents
Geotagged photographs / videos of facilities	<a href="#">View File</a>
Policy documents and brochures on the support to be provided	<a href="#">View File</a>
Details of the software procured for providing assistance	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

The institute is proactively taking efforts in providing an inclusive environment. The initiatives are to promote better education, economic upliftment of the needy, and setting communal harmony

- Unnat Bharat Abhiyaan (Under Ministry of HRD)- An adopted cluster of five villages Botholi, Bendoli, Surabardi, Chargaon, Muradpur in the region to conduct activities for their socio-economic development.
- Providing Scholarships to economically weak students.
- Celebration of Independence Day, Republic Day, National Youth Day, Yoga Day, Constitution Day, and other such activities to provide for an inclusive environment by bringing students and teachers with diverse backgrounds on a single platform for creating an inclusive environment.
- The course on Constitution of India and Indian traditional Knowledge is embedded in the curriculum
- Initiatives like Blanket Donation, Grocery donation, Road safety awareness, Blood and Plasma Donation, webinar on Ancient Traditional Water Management System in India help in developing harmony towards culture and contribute towards the noble cause of serving society.
- Prerana 13.0 aims at sensitizing students on various issues related to people with disabilities and also on an inclusive society for such people.

File Description	Documents
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	<a href="#">View File</a>

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

The Institute has curated various courses that sensitize students with the concepts that encourage the building of universal human values like sensitivity about gender, environment, sustainability, ethics, etc. While some of the courses like 'Organizational Behaviour' and 'Human Relationship Dynamics' introduce students to concepts like understanding values, attitudes, job- satisfaction, and multiculturalism while Constitution of India, talks about fundamental rights and duties along with the Directive Principles of State policy that strongly advocate human values. The course 'Human Relationship Dynamics' introduces the concepts of values and ethics, Education, Technology, and Society throws light on ethical issues in the use of technology. 'Basic Ornithology for Engineers' course sensitizes students about the importance of the environment, its conservation, and the ethics that have to be followed while interacting with nature. A course like Technical Communication introduces the importance and use of gender-neutral language as well as following ethical principles in writing. Some courses on Leadership skills stress emphasize the role of human values as an integral part of the qualities of a good leader. Other extension activities that inculcate values necessary to transform students into responsible citizens include Junoon, Prayas, Speak Streak, Reflection, webinars on "1% formula for success", 'Open Mic' etc.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

**7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this**

A. All of the above

**regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized**

File Description	Documents
Code of Ethics - policy document	<a href="#">View File</a>
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	<a href="#">View File</a>
Any other relevant information	No File Uploaded

7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

The institution celebrates with great enthusiasm to commemorate the ideology of nationalism and to pay tribute to our National Leaders. The Faculty, Staff, and Students of the institution come together to celebrate these occasions and spread the message of Unity and Peace. The Institute has organized the following programs to commemorate and national/ International day, festivals, Events, and the anniversaries of great personalities:

- National festivals (Independence Day and Republic Day). Patriotic songs, dance performances, and drama were presented Online on these occasions.
- International yoga day was celebrated on June 21
- The Birth anniversary of Swami Vivekananda which is observed as National Youth Day is celebrated on January 12.
- 'National Sports Day ' on August 29, 2020 (birth anniversary of Major Dhyanchand)
- Constitution day celebrated on November 26 to create awareness about the values of constitutional democracy among students.
- National Unity Day was celebrated on October 31.

- NSS Foundation Day was celebrated on September 24.

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	<a href="#">View File</a>
Geotagged photographs of some of the events	<a href="#">View File</a>
Any other relevant information	No File Uploaded

## 7.2 - Best Practices

7.2.1 - Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC

### 1. Title of the Practice

Use of technology for teaching-learning and evaluation

### 2. Objectives of the Practice

Promoting the use of technology for effective teaching-learning to mitigate the effect of Covid-19 on the education system

### 3. The Context

With this sudden shift away from the classroom, and adoption of digital technologies to facilitate student learning, implementing the practice was a challenge along with the available IT infrastructure along-with students with different demographics.

### 4. The Practice

The Institute has harnessed the potential of technology in education and successfully conducted online teaching by onboarding all courses on Google classroom for better academic transactions between faculty and students.

### 5. Evidence of Success

Comprehensive online teaching and evaluation ecosystem is developed and classes are successfully conducted (Theory+ Laboratory) as per the academic calendar. It was a seamless transition from on-campus learning to online learning without loss

of time.

## 6. Problems Encountered and Resources Required

Addressing the aspect to work in a controlled laboratory setting for Laboratory courses which is a necessary aspect of engineering education in online teaching is challenging with limited online resources.

File Description	Documents
Best practices in the Institutional website	<a href="http://www.rknec.edu/Imp%20Links/BestPractices.aspx">http://www.rknec.edu/Imp%20Links/BestPractices.aspx</a>
Any other relevant information	Nil

## 7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

The Institute's distinctive feature emanates from the adoption of TRANSPARENCY as a prime governance policy. This policy has resulted in a major outcome in the form of improved institutional performance.

Some distinctive activities undertaken in this direction during Covid-19 include:

### Excellence in Academics:

- Use of Effective Pedagogy for Online Teaching-Learning
- Introduction of new programmes on emerging trends
- Credit transfer through MOOCs
- Co-teaching by industry experts

### Skill enhancement through Experiential Learning:

- Virtual Campus Recruitment Training and Career Guidance Webinar
- Expert Lectures by Alumni and Industry experts from India and Abroad
- Industry Internship and projects

**Exploration of Knowledge through Research:**

- Technology development and transfer initiatives
- Centers' of Excellence to encourage consultancy and multidisciplinary research
- Research Internship

**Promote Social Commitment:**

- Mental health counseling
- Student Engagement through various online cultural events
- Social media campaign for Safety Awareness
- Financial Contribution towards PM Cares and CM Relief Fund
- Services Extended to Nagpur Municipal Corporation, Nagpur Police Department, Health & Medical Budding Entrepreneurs Support for technology development and SMEs
- Help extended to Migrants by volunteering with NGOs

**Excellent Placements and Internships:**

The institute has seen a consistent progression in the number of placements and internships leading to highest number of offers in the region during pandemic too.

File Description	Documents
Appropriate link in the institutional website	<a href="http://www.rk nec.edu/Imp%20Links/docs/Institutorial%20Distinctiveness.pdf">http://www.rk nec.edu/Imp%20Links/docs/Institutorial%20Distinctiveness.pdf</a>
Any other relevant information	No File Uploaded

**7.3.2 - Plan of action for the next academic year**

1. Ranking and Accreditation
2. Promotion of research culture amongst students and Faculty.
3. Capacity development of faculty in the emerging areas
4. Vision 2030 Strategic Plan
5. Collaboration for enhancing academic rigor with institutions of repute
6. Organization of conferences/seminars in emerging areas and NEP 2020
7. Creation of an ecosystem to achieve sustainable development goals