



## YEARLY STATUS REPORT - 2020-2021

### Part A

#### Data of the Institution

<b>Part A</b>	
<b>Data of the Institution</b>	
<b>1.Name of the Institution</b>	Narasaraopeta Engineering College
• Name of the Head of the institution	Dr.M.Sreenivasa Kumar
• Designation	Principal
• Does the institution function from its own campus?	Yes
• Phone No. of the Principal	08647239903
• Alternate phone No.	08647239905
• Mobile No. (Principal)	9440757039
• Registered e-mail ID (Principal)	principal@nrtec.ac.in
• Address	Kotappakonda Road,Yellamanda Post
• City/Town	Narasarapet
• State/UT	Andhra Pradesh
• Pin Code	522601
<b>2.Institutional status</b>	
• Autonomous Status (Provide the date of conferment of Autonomy)	19/04/2016
• Type of Institution	Co-education
• Location	Rural

• Financial Status	<b>Self-financing</b>				
• Name of the IQAC Co-ordinator/Director	<b>Dr.B.Venkata Siva</b>				
• Phone No.	<b>08647239923</b>				
• Mobile No:	<b>9692464540</b>				
• IQAC e-mail ID	<b>iqac@nrtec.in</b>				
<b>3.Website address (Web link of the AQAR (Previous Academic Year))</b>	<a href="https://www.nrtec.in/wp-content/uploads/2021/09/NAAC-AQAR-19-20.pdf">https://www.nrtec.in/wp-content/uploads/2021/09/NAAC-AQAR-19-20.pdf</a>				
<b>4.Was the Academic Calendar prepared for that year?</b>	<b>Yes</b>				
• if yes, whether it is uploaded in the Institutional website Web link:	<a href="https://www.nrtec.in/academic-calendar/">https://www.nrtec.in/academic-calendar/</a>				
<b>5.Accreditation Details</b>					
Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
<b>Cycle 1</b>	<b>A</b>	<b>3.05</b>	<b>2015</b>	<b>03/03/2015</b>	<b>31/12/2021</b>
<b>6.Date of Establishment of IQAC</b>			<b>20/12/2012</b>		
<b>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.)?</b>					
Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount	
<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>Nil</b>	<b>0</b>	
<b>8.Provide details regarding the composition of the IQAC:</b>					
• Upload the latest notification regarding the composition of the IQAC by the HEI	<a href="#">View File</a>				
<b>9.No. of IQAC meetings held during the year</b>			<b>4</b>		
• Were the minutes of IQAC meeting(s) and	<b>Yes</b>				

compliance to the decisions taken uploaded on the institutional website?	
<ul style="list-style-type: none"> <li>If No, please upload the minutes of the meeting(s) and Action Taken Report</li> </ul>	No File Uploaded
<b>10. Did IQAC receive funding from any funding agency to support its activities during the year?</b>	No
<ul style="list-style-type: none"> <li>If yes, mention the amount</li> </ul>	
<b>11. Significant contributions made by IQAC during the current year (maximum five bullets)</b>	
Programs/Seminars conducted on OBE and NAAC for quality improvement in academics and administration	
Conducted 70+ seminars / workshops, FDPs, Guest Lectures, training / certification programs	
Applied for NBA for CSE and ECE departments	
IIQA submitted for Cycle II NAAC Accreditation	
Focused on improving the quality in education by conducting periodical Academic Audit by internal and external experts	
<b>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:</b>	
Plan of Action	Achievements/Outcomes
It is proposed to apply for various project funding agencies.	<ul style="list-style-type: none"> <li>AICTE has sanctioned Rs. 2,05,567 for STTP for ECE department</li> <li>IQAC cAICTE has sanctioned Rs. 10,313,73 for MODROB</li> <li>AICTE has sanctioned Rs. 93,000.00 for Faculty Development Programme on "Cyber Security"</li> </ul>
It is proposed to participate in Times of India Survey 2020.	Chairperson IQAC informed that, Narasaraopeta Engineering College ranked 5th among Top 10 private Engineering in AP

It proposed to have seminars on OBE and NAAC for faculty	IQAC has conducted one week FDP on "An Insight into Revised Accreditation Framework of NAAC"
It is proposed to have MOUs with reputed organizations and industries	<ul style="list-style-type: none"> <li>• NEC has done MoU with ByteXL India Pvt. Ltd.</li> <li>• NEC has done MoU with Dassault Systems 3D Experience Centre in association with APSSDC.</li> <li>• NEC has done MoU with CANTER CAD on 17-02-2021.</li> <li>• NEC has done MoU with iCrederity on 1-12-2020.</li> <li>• NEC has done MoU with National Highway Authority of India (NHAI) on 01/04/2021.</li> </ul>
It is proposed to start NCC unit in College	IQAC coordinator informed that 23(A) BN NCC Chirala has sanctioned NCC unit on 3-6-2021 to our college.
It is proposed to have technical enhancement programs for students and faculty	70+ FDP/Workshop/Seminar programs on latest technologies conducted by departments to enhance the skills of the students and faculty
It is proposed to conduct R19 2nd BOS meeting in the month of Feb 2021 & R20 1st BOS for CSE (AI) in the month of Jan 2021.	<ul style="list-style-type: none"> <li>• R19 second BOS was successfully conducted in month of FEB.</li> <li>• R20 first BOS for CSE (AI) was successfully conducted in month of Jan 2021.</li> </ul>
It is proposed to conduct R20 first BOS in month of Dec.	R20 first BOS is successfully conducted in month of Dec 2020 by all departments.
To Monitor Teaching Learning process	Internal Academic audit was done during 13th -17th Dec.2021 and external audit was conducted on 23rd and 27th Dec.2021
<b>13. Was the AQAR placed before the statutory body?</b>	Yes
<ul style="list-style-type: none"> <li>• Name of the statutory body</li> </ul>	

Name of the statutory body	Date of meeting(s)
<b>Governing Body</b>	<b>08/01/2022</b>
<b>14. Was the institutional data submitted to AISHE ?</b>	<b>Yes</b>
<ul style="list-style-type: none"> <li>Year</li> </ul>	
Year	Date of Submission
<b>31/12/2021</b>	<b>31/12/2021</b>
<b>Extended Profile</b>	
<b>1. Programme</b>	
1.1 Number of programmes offered during the year:	<b>16</b>
File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
<b>2. Student</b>	
2.1 Total number of students during the year:	<b>3874</b>
File Description	Documents
Institutional data in Prescribed format	<a href="#">View File</a>
2.2 Number of outgoing / final year students during the year:	<b>866</b>
File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
2.3 Number of students who appeared for the examinations conducted by the institution during the year:	<b>3624</b>

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
<b>3.Academic</b>	
3.1 Number of courses in all programmes during the year:	<b>671</b>
File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
3.2 Number of full-time teachers during the year:	<b>254</b>
File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
3.3 Number of sanctioned posts for the year:	<b>31</b>
<b>4.Institution</b>	
4.1 Number of seats earmarked for reserved categories as per GOI/State Government during the year:	<b>687</b>
4.2 Total number of Classrooms and Seminar halls	<b>77</b>
4.3 Total number of computers on campus for academic purposes	<b>1156</b>
4.4 Total expenditure, excluding salary, during the year (INR in Lakhs):	<b>882.64</b>
<b>Part B</b>	
<b>CURRICULAR ASPECTS</b>	

## 1.1 - Curriculum Design and Development

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 Institute has the systematic procedure for development, revision and implementation of curriculum of all the departments. The curriculum is designed carefully by addressing the recent technologies and the opportunities existing in regional and global level with all necessary fundamentals.

### Factors for Curriculum Design:

The factors considered for design of curriculum are: (i) Syllabus of various reputed Indian and International Universities (ii) Model curriculum prescribed by AICTE, (iii) The Program Specific Outcomes of professional bodies, (iv) Suggestions by industry experts and alumni, (v) Syllabi of various competitive exams like GATE, IES, etc,

### Implementation of Outcome Based Education (OBE) in the Curriculum:

- The initial phase for ensuring academic quality is the design of the curriculum, in particular, the types of courses, the number of electives, and the curricular structure, with complete details of the course title and course contents as per the regulations.
- The next phase, the Course Outcomes (COs) for every course is mapped with the Program Outcomes (POs) of NBA and the Program Specific Outcomes (PSOs) of the program.
- An effective implementation of this Outcomes Based Education (OBE) ensures that our graduating engineers have all the 12 POs defined by NBA, and hence can compete on a global platform, and have expected global attributes. Specific to every program, we have 3-5 Program Educational Objectives (PEOs) that are measured through the performance of the alumni.

The Institute keenly observes the attainments of PEO, PO and PSO for the respective programs which intern relates to Vision and Mission of the institution and Department as well.

### Process for Curriculum Design:



The proposed curriculum is then discussed in DAC (Department Advisory Comity) and is put forth to BOS (Board of Studies) where the experts from industry, academia, Alumni in addition to senior faculty members. The curriculum is then placed for approval during the Academic Council (AC).

The academic autonomy of the Institution provides the opportunity to frequently revise the curriculum based on needs and suggestions from various stake holders. In last five years the syllabus of UG programmes was revised in 2016, 2019 and 2020 and for PG in 2016 and 2019. Since the institution is situated in the rural area, revision of the curriculum focuses mainly on introducing new courses with multiple facets for improving the soft skills, general aptitude and technical aptitude. Major, Minor and Honors programmes have been introduced in regulation R20 to provide the students to become a master in their respective branch and students who are desirous of pursuing their special interest areas other than the chosen discipline.

The students are made mandatory to upgrade their knowledge by undergoing MOOCS courses through NPTEL. Further the Internship made compulsory for all the students and as a result the student can upgrade the knowledge base in diversified fields. In addition to the curriculum, student's skills are upgraded by conducting various value-added courses and become industry ready.

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

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

8

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	<a href="#">View File</a>



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

735

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	<a href="#">View File</a>

**1.2 - Academic Flexibility****1.2.1 - Number of new courses introduced across all programmes offered during the year**

233

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>
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**

8

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>
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

A Professional with value education and ethics has the ability to judge between right and wrong, makes better decisions and also decision making process easier. Values are the optimistic teachings that are represented to make professionals walk through the right path of life. The curriculum is designed, developed and enriched with an aim to integrate ardent issues having national and global emphasis for future generations' sustainability. The courses relevant to Gender, Environment and Sustainability, Human values and Professional Ethics will augment the knowledge and skills acquired during the engineering education and in turn enable the engineering graduates to practice their profession / discharge their duties with societal responsibility.

**Gender Sensitization:** The course Gender Sensitization is offered as a basic requirement for personal and professional development. The objective of the course is to understand the needs of a particular gender and also the opposite, to emphasize gender-equality and their contributions to society and to overcome any sort of differentiation or harassment. Gender sensitization makes men and women familiar with each other's

lives and with accountability in an organisation as well as at home to produce positive results in society. It also helps in generating respect for an individual irrespective of gender.

**Environmental and sustainability:** The courses pertaining to Environment and sustainability are included in the curriculum with an ardent intention to make the students understand human life and the natural system. It focuses on studying and understanding problems of the environment and consequences due to Man-made effects on the environment and finding the solutions to preserve the environment by untying the pollution from air, water and land.

**Human Values and Professional Ethics:** The engineering graduates should possess resilient Human Values and practice strong Professional Ethics for a better society. Values provide an essential feature of self-conception which function as individual supervisory concepts. Human values are the qualities that direct individuals to take the human aspect into consideration as one communicates with another human being. In practising their career, professional engineers and consultant engineering companies control the quality of life of all persons in society and the quality

of all sectors of the economy. A mandatory course, "Human Values and Professional Ethics" is offered, to craft the students into altruistic and conscientious professionals. Under the National Service Scheme (NSS), tree plantation, blood donation camps, rehabilitation services during natural calamities are organized. AIDS, On Women Safety, Swachh Bharat and Save Trees.

Constitution of India: The engineering graduates should possess resilient constitution of India is included in the curriculum with an ardent intention to make the students understand the constitution represents is the values that India celebrates every day. The fundamental rights that the constitution of India guarantees its citizens to keep them safe from the bad element. The values of liberty, equality, fraternity and secularism are some of the values that are celebrated all over the world and the Indian Union stands as a testimony for these values.

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	No File Uploaded

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

20

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	<a href="#">View File</a>

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

1814

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****1612**

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**1.4 - Feedback System**

**1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni**

**A. All 4 of the above**

File Description	Documents
Provide the URL for stakeholders' feedback report	<a href="https://www.nrtec.in/stakeholders/">https://www.nrtec.in/stakeholders/</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="https://www.nrtec.in/stakeholders/">https://www.nrtec.in/stakeholders/</a>
Any additional information	<a href="#">View File</a>

**TEACHING-LEARNING AND EVALUATION**

<b>2.1 - Student Enrollment and Profile</b>	
<b>2.1.1 - Enrolment of Students</b>	
<b>2.1.1.1 - Number of students admitted (year-wise) during the year</b>	
1010	
File Description	Documents
Any additional information	<a href="#">View File</a>
Institutional data in prescribed format	<a href="#">View File</a>
<b>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)</b>	
627	
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>
<b>2.2 - Catering to Student Diversity</b>	
2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.	
<p>The institution offers quality education with a structured curriculum and also provides a strong base for the nourishment and overall development of the students by strengthening their physical and intellectual abilities. Most of the students joining the institution into various programs are from rural and urban backgrounds with different socio-economic statuses. The institution has well-planned multi-level strategies that are implemented from time to time to address the issues of diversity in students' learning levels.</p> <p>Once, students joins in program, an orientation program is organized for all students in the first semester before they begin their regular academic curriculum. This orientation program is designed to help students get acclimatized and adjusted to academic life in a higher education institution. During the induction program, detailed orientation is given to students in Mathematics, Physics and Chemistry to bridge the gap between intermediate education and the foundations required for professional education. Students are also</p>	

given awareness of the importance and application of these subjects in professional education thereby helping them to build an appreciation for these subjects and seriously apply themselves to learning the fundamentals of these subjects.

After the orientation program, the students are categorized as Advanced and Slow learners based on the exam conducted after the orientation program, their Intermediate marks and ranks in EAMCET. In the subsequent semesters the learning abilities of the students are evaluated through mid examinations, assignments, classroom interactions and mentoring. Based on the performance in all of these, students are categorized as advanced and slow learners. Through brainstorming sessions, Department lists a host of strategies for advanced learners and slow learners for appropriate curricular interventions and needful procedures.

#### STRATEGIES FOR SLOW LEARNERS

- Remedial classes are conducted for slow learners after regular class schedules on specific days for each course and individual attention is paid for improving the students' level of learning, problem-solving and presentation.
- Special attention/counseling by the mentors.
- Conducting slip tests to improve their performance.
- Providing material for important and tough topics.
- Provide extra lab hours to improve their practical knowledge.

These measures make the learners feel educationally, financially and socially comfortable once they enter the college. This way, the slow learners are given due attention and streamlined in the academic mainstream.

#### STRATEGIES FOR ADVANCE LEARNERS

- Encourage students to go for additional courses with self-learning like NPTEL, MOOCs and certificate courses.
- Motivate them to attend conferences, workshops, paper presentations and other co-curricular activities.
- Encourage to take up mini projects to enrich their technical skills.

- Encourage students to attend competitive examinations.
- Encourage to become members of professional bodies like IETE, IEEE, CSI, IEI etc.
- Expose them to new technologies like IoT, AI & ML, Data science through specific training programmes.

These measures make the learners feel educationally, financially and socially comfortable once they enter the college. This way, the advanced learners are encouraged.

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
01/11/2021	3654	285

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 Power point presentations are used in the classrooms to provide audio visual experience to the students. The NPTEL video lectures are adopted. The "Think-Pair-Share" is implemented in the class rooms. Quizzes are conducted regularly. The Assignments are given to the students to nurture their problem solving abilities. Collaborative learning is practiced. For ex, the MOOCs tie-up with



IIT, Bombay. The Inpods tool is used to assign, monitor and evaluate assignments and quizzes. The Edmodo tool is used to share knowledge among the peers. The Moodle, an open source learning platform is used to share information, to create quizzes, to build modules etc. The social learning platform, Wiksate is effectively used for collaborative learning. The lecture capturing platform, Impartus, provides an E-Learning solution of automatic recording and distribution of classroom lectures on flipped class model.

The Project Based Learning is adopted for the self-study components from 3rd semester onwards. The students have to do projects pertaining to a comprehensive course which has two credits of self-study component. The project allocation, monitoring and evaluation system is in place. Rubrics for project evaluation covering all the quality criteria's. The mapping to the appropriate POs is also done with the level of mapping. Effectively designed open ended experiments are adopted. These experiments challenge the student's critical thinking, analysis and design capabilities. The students are also trained on virtual labs and modern simulation tools. The industry visits/site visits/ survey camps, guest lectures are conducted regularly on the latest topics and trends in the industry. Hands on workshops by the industry experts. Important Elective courses are offered along with the experts from the industry. Propel labs are established to promote research from the first year.

The final year Projects are mentored and evaluated by externals from professional body and industry. These projects are evaluated by a well-defined detailed rubrics framework to ensure quality of the projects. The best projects are awarded prizes.

Audit courses /Value added programmes are conducted on various topics. The students are also trained towards abstract writing, technical paper writing and literature survey. The OBE is practiced in true spirit resulting in more focussed all-round development of our students.

**Modern Tool Usage:** Use of technology (MOOCs and Blended MOOCs) for enhancing the learnability coefficient (self-pace) of the graduates, recording of live lectures and social learning platforms like WIKSATE.

**Industry-Institute-Interaction:** Collaborative efforts with the industry personnel for enhancing the learning levels of the graduates. Conduction of Annual Technical Symposium- "PHASE SHIFT", Exhibition of research projects of UG/PG students and industrial visits in coordination with industries.

Student Support System: Remedial Classes for the slow learners and Bridge courses for lateral entry students are conducted regularly. The Departments have also evolved many best practices with student centric methods. The Institution has recently established a Technology & Innovation Club for students with an aim to inculcate the culture of innovation amongst students and encourage them to generate new ideas. The Institution ensures overall development of students through participatory learning experience.

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

Today, it is essential for the students to learn and master the latest technologies in order to be corporate ready. As a consequence, teachers are combining technology with traditional mode of instruction to engage students in long term learning. College uses Information and Communication Technology (ICT) in education to support, enhance, and optimize the delivery of education.

The following tools are used by the Institute-

#### ICT Tools:

1. Projectors- Projectors are available in different classrooms/labs  
 2. Desktop and Laptops- Arranged at Computer Lab and Faculty cabins all over the campus.  
 3. Seminar Rooms- Five seminar halls are equipped with all digital facilities. .  
 4. Online Classes through Zoom, Google Meet, Microsoft Team, Google Classroom)  
 5. MOOC Platform (NPTEL, Coursera, SAP, Udemy, Edx etc)

6. Digital Library resources (DEL NET), NPTEL, IEEE

#### Use of ICT By Faculty-

A. PowerPoint presentations- Faculties are encouraged to use power-point presentations in their teaching by using LCD's and projectors.

They are also equipped by digital library, online search engines and websites to prepare effective presentations.

B. Industry Connect- Seminar and Conference room are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students.

C. Video Conferencing- Students are counselled with the help of Zoom / Google meet applications. E. Video lecture- Recording of video lectures is made available to students for long term learning and future referencing.

F.The academic plan with budget, lesson plan, lab manuals and question banks with solution are made available at the very beginning of the semester.The use of multimedia teaching aids like, LCD projectors, classrooms with internet enabled computer/laptops/tablet systems are usually in use in classroom.

G. The faculty members effectively utilize Audio Visual aids to demonstrate the concepts to the students using the resources from National Programme on Technology Enhanced Learning (NPTEL) to enhance the learning experience.

H.USB Hard disk containing web and video courses (offline) from NPTEL are accessible to faculty and students from the server installed in the library. These courses are the part of LMS.

I.Seminar hall is equipped with multimedia facilities using ICT tools. Invited talks and webinars are conducted in seminar hall using ICT facilities.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	Nil
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

192

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 is prepared by the Curriculum Development Council of Narasaraopeta Engineering College and it strengthens the effective functioning of the institution. The Council consists of the Principal as the Chairman and other members including Coordinator of Internal Quality Assurance Cell, and the vice Principal. On the basis of the decision taken by the Curriculum Development Council, the Dean for Academic Affairs prepares the Calendar and it ensures the well-functioning of the departments and other service units for 90 working days in a semester.

The college academic calendar follows the instruction of APSCHE and JNTUK academic calendar. The Calendar includes the details of all the working days, dates of the Continuous Internal Assessment Tests, Summative Examinations, dates to remit the College and Examination Fee, and the list of activities of the academic year. It is made known to the students, parents and stakeholders on the college website. This almanac gears up the overall functioning of the institution. It is printed and displayed in the notice boards, and kept in the college website. The calendar, made available to the students before the commencement of classwork, includes:

- First and last day of instruction, schedules of internal and external exams, preparation holidays for final examinations, and vacation periods.

### Teaching Plan

As per the direction of the Dean for Academic Affairs, the departments plan out their relevant methodology to complete the respective syllabus using the suitable learning resources within the stipulated time period. Teaching faculty plan to adopt required Digital Infrastructure to make teaching more effective. Adhering to the pattern of evaluation decided in the Teaching Plan, departments are able to assess the learning capacity of the students periodically. The teaching plan prepared by the course teacher on each course visualizes the plan of the teacher to accomplish more informative, interesting, analytical and resourceful teaching. It helps both the teacher and the learner to take part in the teaching learning process effectively. Teaching Plan is crystal clear to the learning community for their better understanding of each course. Thus, the preparation of the Academic Calendar and Teaching Plan and the adherence to them are a collective venture of everyone dedicated to the accomplishment of the Teaching and Learning process effectively. Effective implementation of the lesson and lecture schedules is monitored by the Head of the Department as well as academic auditors. Also, at the beginning of the academic year, every Programme coordinator prepares the calendar of academic events like Workshops, Conferences, Visiting faculty lectures, Industrial visits etc..

The academic plan is structured in accordance with the needs of Outcome Based Education prescribed by National Board of Accreditation (NBA). The contents of the plan include:

- Course prerequisites
- Course objectives and outcomes
- Mapping of course outcomes with program outcomes
- Learning resources
- Delivery methodologies - LBD (Learning by Design).
- Assessment methods
- Detailed unit wise lecture plan
- Assignment and tutorial questions
- Model question paper

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<a href="#">View File</a>
<b>2.4 - Teacher Profile and Quality</b>	
<b>2.4.1 - Number of full-time teachers against sanctioned posts during the year</b>	
<b>254</b>	
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	<b>No File Uploaded</b>
<b>2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year</b>	
<b>70</b>	
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>
<b>2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)</b>	
<b>1323</b>	
File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>
<b>2.5 - Evaluation Process and Reforms</b>	



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

13

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	<a href="#">View File</a>

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

22

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 schedules are prepared by adhering to Institute Academic Calendar.**

**A couple of midterm and four assignment tests are conducted as part of continuous assessment. In addition, two Mini projects and one Major project executed by the students and the reviews are conducted to assess the progress of the students in project work. BEES ERP software is implemented for student attendance, marks and other related activities. Autonomous examination activities like exam fee collection, hall ticket generation, seating plans and post processing of results are done by BET tool of BEES ERP. Learning management system (MOODLE) software is used for conducting online exams and for uploading teaching learning material. HEBEON software tool is used for self-learning of programming languages like C, JAVA, PYTHON etc. Koha software is used for library automation. Firewall software is implemented for protection and secure of**



information software. Day wise / room wise/ semester wise seating arrangement is prepared for all the examinations. Required number of faculty members are appointed as invigilators from the different departments. The question paper for the end semester exam is set by external faculty members who taught the subject for at least three years drawn from the approved list of paper setters. Enough care is taken to ensure the standard, spread of the syllabus and mapping of COs and following BLOOM taxonomy. Special squads with internal and external faculty, prompt actions by Malpractice enquiry committee against malpractices, if any, relevant concessions for the Physically Challenged students with minimum 40% of disability as per norms , etc are regular features.

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

Course Outcomes (COs) are defined for every course, and are statements that describe the competencies gained by the student through the course. Every CO is aligned to one or more POs, and is measured at the end of the course, through various assessments, designed specifically to effectively measure the CO and contribute to the PO that it is mapped to. The number of COs for a course is not fixed, and may have about six COs. Few courses may have as few as three COs, while courses like the project may have as high as twelve COs. While defining the COs, we need to ensure that they are not an abridged version of the course content, but instead, through every CO, we attempt to specifically address one or more POs through the course content and its assessments. When COs are well defined, the CO-PO mapping becomes redundant, as one can map the CO to the PO through comprehending the essence of the CO. However, the strength of the mapping is dependent on the course instructor and this component, necessitates the need to have the CO-PO mapping together with its strength.

Syllabus:

All courses of the curriculum have well defined COs, the CO-PO mapping with its strength and is included in the syllabus. The hardcopy of the syllabus is made available to every student.

**Website:**

The syllabus of all programs offered by the department is uploaded on the College website which includes the COs of various courses of the curriculum.

**Course hand-out:**

The course hand outs for every program includes Vision-Mission, PEOs, POs, PSOs of the Program offered by the department and COs of various courses of the Curriculum

**Library:**

Institute's central library keeps all the POs, PSOs and COs for easy access to students and faculty through the syllabus books of various programs.

**Lab Manual:**

All POs, PSOs and COs of specific lab course are printed on lab manuals and issued to all students at the beginning of every semester.

**Course Files:**

All the faculty members will prepare a course file for each course they are handling, in course file the POs, PSOs and COs are mentioned.

**Course Information Sheet:**

The course information sheet is prepared for the courses taught, the CIS has the list of POs and PSOs and Cos of the course and the mapping of COs with POs are indicated. The CIS and other course hand outs are circulated to the students.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/2.6.1-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/2.6.1-1.pdf</a>

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

The process of attainment of COs, POs and PSOs starts from writing appropriate COs for each course of the program from first year to fourth year in a four-year engineering degree program. The course outcomes are written by the respective faculty member using action verbs of learning levels suggested by Bloom and Anderson. Then, a correlation is established between COs and POs in the scale of 1 to 3, 1 being the slight (low), 2 being moderate (medium) and 3 being substantial (high).

Assessment is one or more processes carried out by the department, which identify, collect and prepare data to evaluate the achievement of POs and Program Specific Outcomes (PSOs). Attainment is the action or fact of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed by examination results.

Course Outcomes (COs): Statements indicating what a student can do after the successful completion of a course. Every Course leads to some Course Outcomes. The CO statements are defined by considering the course content covered in each module of a course. For every course there may be 5 or 6 COs. The keywords used to define COs are based on Bloom's Taxonomy

Indirect methods such as Course End Surveys ask the students to reflect on their learning. They access opinions or thoughts about the graduate's knowledge or skills. Indirect measures can provide information about graduate's perception of their learning and how this learning is valued by different stakeholders.

Following are the different methods for Assessment, Evaluation and Measurement of POs/PSOs

- Direct Assessment methods

◦ Indirect Assessment methods

Direct Assessment methods:

Continuous Assessment: COs are assessed through Sessional & Assignment Examinations and Lab records. The COs are mapped against each question and CO analysis is carried out by faculty for each course and documented. The contributions of COs are assessed in high, moderate and low levels, towards the attainment of POs/PSOs.

Semester-end Theory Examinations: The questions in semester-end examinations are tested pertaining to all COs, in varying Blooms Taxonomy Levels.

Laboratory Records: Both continuous and semester-end examinations are conducted to test the COs attainment.

Indirect Assessment Methods:

Programme - Exit survey: This survey taken from the final year students at the completion of their B.Tech programme stands as the comprehensive feedback for the PO/PSO assessment

Alumni Survey: This survey is conducted annually through Google link or mail with the Alumni to obtain the inputs and suggestions on PO attainment in the real time societal environment

Employer Survey: This survey is taken from the employer to measure the PO attainments.

External Examination Assessment Process:

Rubrics:

If 50% of the students crossed 50% of the marks: Attainment Level 1

If 60% of the students crossed 50% of the marks: Attainment Level 2

If 70% of the students crossed 50% of the marks: Attainment Level 3

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

857

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="https://www.nrtec.in/wp-content/uploads/2022/04/2.6.3-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/04/2.6.3-1.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

<https://www.nrtec.in/wp-content/uploads/2022/01/Student-Satisfactory-Survey-2020-2021.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 provides all the necessary infrastructural facilities and a conducive environment to promote research activity on the campus. Due to limited resources, the institute may not be able to fund all the research activities taken up by the faculty and students. Faculties are encouraged to apply for various funding agencies and pursue their research. However, the institute is ready to provide seed funding or partial funding based on the merit of

proposals submitted by faculty or student. The faculty and students are encouraged to present their ideas and project proposals before the research committee for getting the sanction of seed funding in accordance with institute guidelines.

The faculty and students are given liberty to choose the research area of their choice and guidance is given to seek funding from various funding agencies and industries. The institute encourages the faculty by providing incentives for peer reviewed publications, writing books & filing patents. The institute takes care of patent filing process, which is governed by Research policy of the institute.

The institute gives a free hand to report research results and findings. However, a thorough review is done for all research proposals seeking funding from various funding agencies by consulting the research committee comprising the chairman R&D, Head of Institute, Doctorates, all Heads of Department and the subject expert(s) of the department. This committee also monitors the impact of research and consultancy and ensures non-violation of research & consultancy ethics, professional ethics, privacy of the people, human rights, causing problems to health & safety of human beings and damage of the property.

NEC Research Facilities

Infrastructure Facilities

Advanced Library

Latest Technological Inputs

Laboratory facility for Research work

Seed Funding/Partial Funding

Leave during Ph.D Course work



Research Centers are established in various departments of the institute with necessary software and computing facilities for carrying out research activities.

< >The head of the institution and heads of the departments act as catalysts in promoting research activities in the institute. To provide necessary information and guidance to the faculty members for applying Research Projects sponsored by external agencies such as UGC, AICTE, DST and etc. To motivate the faculty members to apply for externally Sponsored Research Projects. The faculties are made available with adequate information about the funding agencies. The institute established well advanced Library in the institute and city center in the promotion of research culture so that researcher should be in a position to get all the necessary information for the research work under taken. The institute allows and encourages its faculty members to enroll in research activity to use the infrastructure such as Laboratory, Library, Equipments, and Electricity and so on. To motivate the faculty members to publish the research papers in reputed Peer Reviewed Journals of a minimum five years standing. The institute also encourages the faculty to attend conferences, seminars, workshops at the national and international level.



File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	No File Uploaded
Provide URL of policy document on promotion of research uploaded on the website	<a href="https://www.nrtec.in/wp-content/uploads/2022/01/3.1.1.pdf">https://www.nrtec.in/wp-content/uploads/2022/01/3.1.1.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)

248142

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	No File Uploaded
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	No File Uploaded

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

03

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

<b>3.2 - Resource Mobilization for Research</b>	
<b>3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)</b>	
70.42	
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	No File Uploaded
<b>3.2.2 - Number of teachers having research projects during the year</b>	
06	
File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/04/3.2.21.pdf">https://www.nrtec.in/wp-content/uploads/2022/04/3.2.21.pdf</a>
List of research projects during the year	<a href="#">View File</a>
<b>3.2.3 - Number of teachers recognised as research guides</b>	
09	
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>
<b>3.2.4 - Number of departments having research projects funded by Government and Non-Government agencies during the year</b>	
09	

File Description	Documents
Supporting document from Funding Agencies	<a href="#">View File</a>
Paste link to funding agencies' website	<a href="https://www.nrtec.in/wp-content/uploads/2022/04/3.2.41.pdf">https://www.nrtec.in/wp-content/uploads/2022/04/3.2.41.pdf</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.

NEC has Institution's Innovation Council (IIC) under the 'MoE's Innovation Cell (MIC)' that provides a vibrant local innovation ecosystem, start-up supporting mechanism, establish function ecosystem for scouting ideas and pre-incubation of ideas and to develop better cognitive ability for technology students. NEC IIC is actively involved in organizing and conducting seminars, workshops, field trips, project exhibitions, entrepreneurship bootcamps, Idea competitions etc. for its students and faculties.

The Entrepreneur Development Cell (EDC) in NEC is dealing with advancing the entrepreneurial culture among the students by conducting programs such as entrepreneurship awareness camps, entrepreneurship development programmes, faculty development programmes, skill development training programmes and entrepreneurship Challenges in setting social business. The Institution has encouraged the faculty members to carry out innovative research projects. Our principal and ten faculty members are research guides. Some of the faculty members are working on funded projects. Two members have finished their minor research projects. Further institution is also giving financial support and facilities for innovative projects proposed by students and faculty members.

The main objectives are to:

- The main objective of promoting entrepreneurship among the youth is to nurture a passion for self-employment. This will open avenues for creation of new knowledge-based innovative hi-tech ventures, industries and new breed of techno preneurs, thus turning job seekers into job creators and in the process, leading the nation towards industrial excellence and self-

reliance.

- To disseminate knowledge and insights in entrepreneurial theory and practice through lectures activities and workshops.
- To collaborate with similar bodies in other B-schools & technology institutes to accomplish the objectives.
- To seek tie-ups with Non-profit Entrepreneurial organizations connecting e-cell to global network of entrepreneurs.
- To create a strong network of successful entrepreneurs who would like to guide budding entrepreneurs.
- Starting Innovation incubation centre
- Starting Campus Companies.
- To create awareness for using IT as the key input for generating self-employment rural industry and marketing of agricultural products.

N.S.S. conducted various activities in innovative ways, tree plantation, Swacch Bharat Abhiyan, awareness programmes about cleanliness construction of toilets, etc. All these activities are with the help of society.

NEC has Innovation and Incubation Centre, that provides creative atmosphere where new ideas and projects can flourish. Incubation centre offers A Platform on business incubation and innovation to provide spaces for incubation, counselling services on business management and technological solutions. Interaction with the industries and other peers, finding the workable issues and provide appropriate solutions. A systematic process designed for innovators to convert their concepts, ideas into product.

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

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

11

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	No File Uploaded
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**

00

File Description	Documents
URL to the research page on HEI website	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/3.4.1-4-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/3.4.1-4-1.pdf</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**

70

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

270

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/dvv/3.4.4(1)(A).pdf">https://www.nrtec.in/wp-content/uploads/2022/dvv/3.4.4(1)(A).pdf</a>

#### 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

290

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

218

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	No File Uploaded

**3.5 - Consultancy****3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)****23.07580**

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****20.37**

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	No File Uploaded
Any additional information	No File Uploaded

**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**

Narasaraopeta Engineering College was allotted a National Service Scheme (NSS) Unit in 2002 by Jawaharlal Nehru Technological University, Kakinada with 100 students enrolled as NSS Volunteers.



The motto of NSS is 'Not Me But You' as stated by Swami Vivekananda. It means service to mankind is service to god. Imparting such values and attitude into the minds of students is the main aim of organisation. Trusting in this, the institute carries out a number of extension activities in the neighbourhood community. Our NSS Unit organized several service oriented activities at university level and state level since its inception. Our NSS unit focuses on the welfare of the neighbourhood community and sensitizes their social problems and takes necessary steps for the betterment of the society. These social outreach programmes brought a great impact on the holistic development of the students as they come across different categories of the people and their living standards. Every year during Independence Day and Republic day, the NSS volunteers coordinate with the other clubs of the institute to demonstrate on a current social problem through parades and rallies. Extension activities in the neighbourhood community during the accreditation period: Free Covid-19 Test and Vaccination Programs, Clean and Green Programs like Swatch Bharath (2016-2020) was conducted at Yallamanda, Guravayapalem and Kesanupalli the nearby villages and our NSS volunteers explained the importance of cleanliness and its impact on health particularly in the pandemic situation to the villagers. Implementing several Chlorination Programs in the village and explained the importance of hygiene to protect the health. After the survey Medical camps were conducted in Yallamanda village to solve their dental, eye, and orthopaedic problems which are identified as major health troubles.

Dental Camps were conducted by Dr.V.RameshBabuGaru, Vishnu Nursing Home, Narasaraopet and our NSS Unit arranged medicines and distributed them at free of cost to villagers. Awareness Program on traffic signals to High school children was arranged and explained precautionary measures to protect from the road accidents.

Massive Plantation Programs were conducted at Yallamanda, Guravayapalem and Kotappakonda Hill premises. Our students planted hundreds of saplings to make green & clean of villages. Due to this plantation air pollution is reduced and residents are benefited. Several Campaigns were conducted on Digital literacy and trained the villagers about cashless transactions through the use of debit cards, online banking, Google Pay, Phone Pay etc. by the students. An awareness campaign through rally on Plastic pollution and the ill effects of plastic usage and plastic waste was carried out in Narasaraopeta town. Usage of paper bags and jute bags are increased.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/3.6.11.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/3.6.11.pdf</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

09

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)

12

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

571

File Description	Documents
Reports of the events	<a href="#">View File</a>
Any additional information	No File Uploaded

## 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

27

File Description	Documents
Copies of documents highlighting collaboration	<a href="#">View File</a>
Any additional information	No File Uploaded

### 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)

16

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	No File Uploaded
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.

Total Built-up Area in the institution is 31,362 Sq.m. The institute has the excellent infrastructure facilities. Adequate facilities for teaching learning process are available. Laboratories are well established with sophisticated equipment. English language communication skills laboratory and e-learning centers for attending remote courses are available. Central library is with national and international journal subscription and large number of book volumes. Fully furnished three number seminar halls with good public addressing system, Wi-Fi and different seating capacities for conducting seminars/workshops/FDP and guest lectures are available. The institution has research centers to cater the needs of research scholars.

BEES ERP software is implemented for student attendance, marks and other related activities. Autonomous exam section activities like exam fee collection, hall ticket generation, seating plans and

postprocessing of results are done by BET tool of BEES ERP. From this year onwards CAMU software is implemented instead of BEES ERP software. Learning management system (MOODLE) software is used for conducting online exams and for uploading teaching learning material. HEBEON software tool is used for self-learning of programming languages like C, JAVA, PYTHON etc. Koha software is used for library automation. Sonic Firewall software developed by Sonic wall SGS6600 of worth Rs.12,00,000 is implemented for protection and secure of information software.

There are 1156 number of computers available in the institution for the benefit of students and staff. All faculty rooms, administrative offices and department offices are provided with computer systems. Free Wi-fi facility is provided in the campus. Many of the classrooms and seminar halls are provided with LCDs, Wi-Fi as ICT facility. Generator facility and 17 UPS are available for uninterrupted power supply. There are 72 classrooms, 70 laboratories, 07 Seminar Halls and 03 drawing halls in the institution

**Cells:** The institute has constituted various cells to create an ecosystem of quality improvement, research and innovation like IPRC, EDC, R&D, IIIC and IQAC etc.,. The institute also has career counseling and guidance cell which provides counseling through seminars and workshops.

**Training and Placement cell:** The T&P Cell gives Campus recruitment training along with soft skills and interview skills to students and also organizes campus drives.

**Workshops and drawing halls:** Narasaraopeta Engineering College has well equipped workshops and drawing halls that fulfill the need of curriculum.

**Library:** NEC has a Central Library that plays a vital role in providing resources which enhance the knowledge of the faculty and students. It is housed in an area of 1200 Sq.m with the seating capacity of two hundred users. It also offers reprographic facility at a minimal price to the faculty and students. The timings are from 8:00 AM to 8:00 PM on all working days & 9.00 AM to 12.00 PM on holidays.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/4.1.11.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/4.1.11.pdf</a>

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

College has provided a number of facilities for supporting extracurricular activities related to culture, creativity, arts and recreation. One AC seminar hall with a seating capacity of 600 was established for conducting Literary and cultural events. College will encourage students to participate in various college levels, state level and national level competitions by providing financial support. College has cultural committee headed by committee including staff and student members

The College framing events through different clubs such as ENERGY CLUB, NATURE CLUB, PAINTING AND PHOTOGRAPHY CLUB, SPORTS CLUB etc. The team actively organizes different events under different clubs throughout the year. Apart from club events the team organizes Student-Parent meet, Fresher's day celebrations, National level technical, cultural and sports fest and Annual day celebrations every year.

Other than organizing events students are allowed to learn western dance, classical dance, Music (vocal and instrumental)

#### Sports and Games:

The Physical Education Department of Narasaraopeta Engineering College has been established in 1998. It took the responsibility not only to provide the necessary infrastructure that help the students to inculcate good habit of playing games but also to develop the sportsmanship and comradeship.

NEC has adequate facilities for sports and games (indoor, outdoor) Gymnasium, Yoga center etc. A well-qualified Physical Director and lady Physical Directors were appointed to train and monitor all sports and games activities. Annual sports day is organized in the month of February and winners receive prizes.

File Description	Documents
Geotagged pictures	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/4.1.21.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/4.1.21.pdf</a>

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

57

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)

163.38

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	No File Uploaded

#### 4.2 - Library as a Learning Resource

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

The Central Library plays an important role in the college, it has situated in Block 3. It caters to the needs of the staff and students of the college. The Library will consist of a Circulation section, Lending Books Section, Reference Section, Book bank Section and Digital Library Services partially automated in the year 1998. The college library is fully automated in the year 2008 with LIBSYS software and encompasses all aspects of library management system,



with seating capacity of 200 spread over 1200 square meters area.

**Library Information:**

**Titles**

7880

**Total No. of Volumes**

65,302 (Including SC/ST Book Bank)

**Book Bank for SC (volumes)**

4758

**Book Bank for SC (Titles)**

610

**Book Bank for ST (volumes)**

617

**Book Bank for ST (Titles)**

130

**Reference Books**

7556

**E-Journals**

3 (IEEE (ASPP), DELNET & NLIST)

**E-Books**

34,38000 (N-List)

**Digital Databases**

1 (DELNET)



PrintJournals

70

Magazines

10

ProjectReports

1313

CD&Videos

2045

DigitalLibrary

NumberofComputers

40withmultimediaand Internetfacility Broad

Band Connectivity

100MBPS

LibraryNetwork Membership

DELNET, N-List, IEEE(ASPP)

ELearningmaterial

16 TB ofNPTELVideolectureson502 subjects

NPTELWeb Courseson433 subjects

BookSearch

Withinthecampusthrough LIBSYS

MediaResourceCentre

Printing facility

Following costlly rare books are available at NEC library

Fluid Power Technology, Narendra Modi Harbinger of prosperity & Apostle of world peace.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/4.2.11.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/4.2.11.pdf</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)**

7.58

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**

210

File Description	Documents
Upload details of library usage by teachers and students	<a href="#">View File</a>
Any additional information	No File Uploaded

### 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 institution frequently updates its IT facilities including Wi-Fi. In total there are 1126 computers. IT facilities are updated from time to time. The CAMPUS IS Wi-Fi enabled. 250Mbps dedicated leased line internet facility through AIRTEL and 400 Mbps bundled bandwidth through BSNL and having FIRE WALL manufactured by Sonic Fire Wall worth Rs.1200000/- to cater to the academic and research needs in the campus.

AP CM Skill Excellence Centre for skill based technical training was established in association with APSSDC in 2018. DASSAULT 3D experience Centre and IOT labs were also established in the same year.

The institute has intranet with 1Gbps fiber optic backbone network with 03 DIGISOL manageable switches supplemented with Wi-Fi support given by 41 access points with 24x7 availability. Now there are 150 unmanageable switches. The campus has 96 surveillance cameras and 36 biometric attendance devices. Internet bandwidth of 50Mbps in 2017 was enhanced to 100Mbps in 2018 and upgraded to 400Mbps through multiple ISP connections.

The institute has Microsoft Volume License and is being renewed every year since 2011. In Sep 2021, it is updated to Microsoft Azure campus license. This license facilitates regular updating of 9 system software and 27 application software including Office 365 and MS Teams for all students and faculty.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/4.3.11.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/4.3.11.pdf</a>
<b>4.3.2 - Student - Computer ratio</b>	
Number of Students	Number of Computers
<b>3818</b>	<b>1156</b>
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>	
	<b>A. 750 Mbps</b>
File Description	Documents
Details of bandwidth available in the Institution	<a href="#">View File</a>
Upload any additional information	<b>No File Uploaded</b>
<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>	
	<b>A. All four of the above</b>
File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/4.3.41.3gp">https://www.nrtec.in/wp-content/uploads/2022/03/4.3.41.3gp</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)

265.322

File Description	Documents
Audited statements of accounts	<a href="#">View File</a>
Upload any additional information	No File Uploaded

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 college ensures optimal allocation and utilization of the available financial resources for maintenance and upkeep of different facilities by holding regular meetings of various committees constituted for this purpose and using the grants received from the college as per the requirements in the interest of students..

##### Maintenance of Academic Facilities:

- The academic requirements like books, journals, developing study materials, IT facilities along with the budget are placed by the Head of the Department in the Academic council and IQAC.
- IQAC places the requisition to the Principal and then the Principal forwards the issues to Administrator/Governing Body or any other relevant committee based on the requirements
- For organizing seminars and workshops, on production of proposal and budget the principal verifies and approves the proposed fund for National/ International level seminars and forwarded to management if necessary.
- College has purchase policy and tender notifications are done for the bulk purchase. Sometimes required goods are also purchased from local vendors as per the requirement. Proper stock register is maintained after the purchase.

##### Civil Maintenance

Maintenance of civil works is needed for getting uninterrupted services whi

ch facilitates smooth and efficient functioning of the institution like maintaining cleanliness and sanitation in the campus

- A request comprising the problem, has to be received through HOD and the Principal. As per the stock availability the problem is attended and resolved
- If any material is required to be purchased, it is needed to get the approval from the principal for the purchase of the same.
- If the cost of the requirement exceeds Rs.10000/-, an approval must be obtained from the management.
- If the work involves more financial support, quotations are invited from the vendors. After the preparation of the comparative statement purchase order will be placed. On receiving the material, work should be started.

#### Laboratory/ Mechanical Maintenance

- If the equipment/machinery is to be serviced during the warranty period, the supplier of the equipment/machinery will be intimated about the repair and it will be serviced either in-house or in the supplier premises based on the nature of defect.
- After warranty period if the equipment/machinery demands service, the technical staff attached to the respective laboratories will do the service to the extent possible.
- If not, identify the persons outside the organization who repair the equipment, if necessary contact the supplier of the equipment.
- If no items are required to purchase for repairing the equipment, the equipment is repaired immediately.
- If items are required for repairing the equipment, a proposal should be sent to the purchase in-charge through proper channel (concerned HOD).
- After the items are purchased the equipment will be repaired by the person.
- The bill (cost of Maintenance) will be sent to the accounts department through proper channel.
- There is a lab instructor in every department, who maintains the stock register by physically verifying the items round the year.
- Department wise annual stock verification is done by concerned Head of the Department.

### Powersupply andMaintenance

- Checkingdiesel in storagetank dailyand Replenishingstock ofdiesel
- Checkingdistilled water level inradiator daily, and if anyshortageisfound, itwill be refilled.
- Checkinglubricant oiland specificgravityof distilled waterof batteries daily
- CleaningtheRadiatorfan belt,generatorsdaily
- Maintainingloadbalanceinthreephasesofgenerators, paintingplinth sandmachineevery year
- Registeringthenumberofworkinghoursof eachgenerator.
- Checkingearthresistanceandwateringtheearthpitsweekly.

### CentralLibrary

- The requirement and list of books is taken from the concerned departments and HOD's are involved in the process. The listshallbeforwarded to the principal for approval who makesanynecessary changes and approvesitandforwardsthe same tolibraryforprocurement of the same.
- Suggestion box is installed inside the reading room to take users feedback. Their continuousfeedbackhelps a lot in introducingnew ideasto enrich the library ambience.
- The books are received by librarian from the supplier. Aninspectionactivitywillbecarriedoutbylibrarian to checkquantity, Title, Author, etc, asperthe invoice.
- Thebooksreceivedbythelibrariansshould be enteredintheAccessionRegister.
- After the completion of Accession, due date slip, numbering shallbepastedon internal Title Page of theBook.
- OnecopyofeachtitleiskeptinReferenceSectiondulystampedasReferen ce Copy
- Toensurereturnofbooks, 'nodues' fromthelibraryismandatoryforstud entsbeforeappearingin an exam.
- Otherissuessuchasweedingoutofoldtitles, scheduleofissue/returno fbooksetc. arechalkedout /resolved bythelibrarycommittee.

### Sportsfacilities:



- The sports committee conduct timely meetings for the purpose of discussing about budget proposal, conduct of Intramural and Intercollegiate tournaments for each academic year.
  - The order is placed with prior approval of the purchase committee.
  - The sports related materials are issued to the students by maintaining an issue/return register which reflects the utility and demand of the items along with the student's interests. Subsequently it facilitates the proposals to be made for the next academic years.
  - Students who are selected for the college teams of various events are provided with uniform to participate in the same.
  - Equipment related to various physical activities and sports are updated on a regular basis.
  - The upkeeping of the sports items in an efficient way is done through regular monitoring using required workforce. This includes all the sports facilities like Gym, Cricket ground, Tennis, Volleyball, Basketball court etc.,

#### Campus Cleaning:

- The cleaning and gardening staff are in charge of keeping the campus (including classrooms, laboratories and playground clean) clean.
- NSS also takes an active part in keeping the campus clean and green.
- Green Campus Committee looks over the overall beautification of the college.

#### Others :

- There are lab instructors in every department, who maintain the stock register by physically verifying the items round the year.
- Department wise annual stock verification is done by concerned Head of the Department.
- Regular maintenance of Computer Laboratory equipment are done by Laboratory Assistant along with Laboratory attendant and they are headed by the faculty in-charge.
- Regular cleaning of water tanks, proper garbage disposal, pest control, landscaping and maintenance of lawns is done by Institute campus maintenance Employees.
- College campus maintenance is monitored through regular

inspection.

- Maintenance of all facilities and cleanliness of environment in Boys and Girls hostels is maintained through Hostel committee.
- ICT enabled classrooms, seminar Halls, auditoriums, etc. are maintained under the supervision of the Network administrator. All works related to periodic inspection, maintenance, and repairs are carried out by the Network administrator and his team of technicians and housekeeping staff.
- A dedicated team comprising a system administrator and technicians takes care of periodic maintenance and upkeep of all computer systems in the Institute. Proper utilization of systems is overseen by the Lab in-charges and concerning faculties.
- The maintenance and upkeep of all classrooms, seminar halls, etc. come under the purview of the administrative officer and his/her team of technicians and housekeeping staff.
- Updating of software is done by lab assistants
- Outsourcing is done for the maintenance of wooden, furniture, electrification, and plumbing if needed
- Regular maintenance of the water cooler and water purifier is done..
- The maintenance of the reading room and stock verification of library books is done regularly by library staff.

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

## 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

2715

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**

0

File Description	Documents
Upload any additional information	No File Uploaded
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="https://www.nrtec.in/wp-content/uploads/2022/03/5.1.3-2-2.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/5.1.3-2-2.pdf</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**

4329

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>

**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**

**A. All of the above**

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	No File Uploaded
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

428

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

25

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	No File Uploaded

### 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

37

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

06

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

The NARASARAOPETA ENGINEERING COLLEGE (NEC) creates a platform for the active participation of the students in various Committees like academic and administrative bodies including other activities. Students are coordinating and organizing various activities related to academics, co-curricular and extracurricular activities to

enhance communication skills, leadership skills, knowledge and abilities towards selected streams with the guidance of faculty members. The Institute has constituted various committees to develop the student role and providing awareness about institutional policies, social responsibilities and making them to achieve their short-term and long-term objectives to reach their goals.

Our students are energetically participated and successfully organized a national level technical fest along with faculty coordinators in the year 2016-17,2017-18,2018-19,2019-20, and 2020, -2021. In this cultural programmes like Dance, singing, mime, mono action and administrative activities in campus apart from the student council successfully organized. These activities are supported the students to fulfil their technical knowledge and increase their performance.

The college physical directors have been conducting games and sports like cricket, kabaddi, kho-kho, volleyball, tenny coit, chess, caroms, running competitions..etc. The students take initiation to involve games, sports to utilize facility for the development of physical fitness. The students participated in university level games and awarded certificates by the university.

Role of students in Institution committees: Students are actively participated as council members in different committees within the campus. The following are the committees

1. Student representation in IQAC
2. Student representation in Anti Ragging Committee
3. Student representation in Women Grievance Redressal Committee
4. Student representation in Grievance Redressal Committee
5. Student representation in Sports Committee
6. Student representation in Alumni Committee
7. Student representation in Canteen Committee
8. Student representation in Transport Committee
9. Student representation in Extracurricular activities Committee
10. Student representation in library Committee
11. Student representation in Women Empowerment Committee
12. Student representation in Grievances/Suggestions Box Committee
13. Student representation in National Service Scheme(NSS) Committee
14. Student representation in National Cadet Corps Committee
15. Student representation in Entrepreneurship and Development Committee
16. Student representation in Placement Cell Committee
17. Student representation in Women Protection Committee

18. Student representation in College hostel Boys/Girls Committee
19. Student representation in SC/ST Committee
20. representation in Minority Committee

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

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

9

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	No File Uploaded

### 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

Narasaropet Engineering College, Autonomous has its alumni association, which was started in 2021. It has a governing body with President, Vice-president, Secretary, Treasurer and General Secretary. President is a senior student who looks after all the meetings, financial aids, and organizing various events with the help of the members of the association and under the guidance of faculty coordinators. Vice-president discharges his duties in the absence of the President. Treasurer takes care of the financial issues and other responsibilities assigned to him by the President. The Management members take part actively in all the activities performed by the alumni association. NEC feels proud of its Alumni association which extends its direct and indirect help to the management and to the students through various means. Top alumnus are placed in prestigious companies like, CGI, TCS, INFOSYS, Tech-Mahindra, Caliber Technologies, Amazon Ltd, BYJUS etc., Most of them



are handling responsibilities like, Software Engineers, R&D Engineers, NDT Engineers, System Engineers, Tech Support Engineers, Software Testers and other government organizations.

The alumni association contributes significantly through financial and non-financial means. The alumni plays a major role in various administrative and academic committees. They provide structured feedback about the syllabus, exam patterns and infrastructural facilities offered by the institution and the valid suggestions are implemented. It shapes the moral, intellectual and psychological attitude of the students as they get number of chances to participate in learning, discussing, and researching about the practical knowledge.

Alumni meets are conducted every year to help their juniors by creating awareness about the job opportunities accessible in the present world, be familiar the strategic methods to meet the necessities of diverse competitive exams like GRE, TOFEL, and other job oriented exams like RRB, SSC, Public service commission's etc., Alumni help students to aware about special scholarships and free ships available to different categories of students by governmental and non-governmental organizations based on their qualification and skills. Especially, alumni staying in abroad motivate other students to find their opportunities in other countries. Arranging guest lectures, internship programs, conducting workshops and seminars, providing training programs and organizing skill development programs to enhance the knowledge of the students in a variety of technical and non-technical fields are some of the most important responsibilities handled by the association.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/about-alumni/">https://www.nrtec.in/about-alumni/</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

- Vision and Mission statements of the Institute was defined by involving the stakeholders.
- Analysis was conducted on basis of feedback forms by considering internal stakeholders including administrative and alumni.
- Armed with the information thus collected, the institutional faculty met number of times to develop and cultivate a strong and meaningful vision and mission. The mission was also finalised based on the following components.

Quality Education

Professional career

Higher Education

o

Creativity

Life- long learning

Our dedication and commitment are to achieve sustainable and unmatched excellence in Technical Education. To this end, we are pursuing continuous development of infrastructure and enhance state-of the art equipment to provide our students a technologically up-to-date and intellectually inspiring environment of learning, research, creativity, innovation and professional activity and inculcate in them ethical and moral values.

**Vision:**

To emerge as a centre of excellence in technical education with a blend of effective student centric teaching learning practices as well as research for the transformation of lives and community.

**Mission:**

- Provide the best class infrastructure to explore the field of engineering and research

- Build a passionate and a determined team of faculty with student centric teaching imbining experimental innovative skills.
- Imbibe lifelong learning skills entrepreneurial skills and ethical values in students for addressing societal problems.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.1.1-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.1.1-1.pdf</a>

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

Strategic plan is an important tool for a college to manage itself effectively because it:

- Provides a frame work for effectiveness and sense of direction
- Outlines the goals and measurable targets
- Is useful for guiding day-to-day actions
- Helps in evaluating progress and changing approaches when moving forward

It is an iterative process at both the stages, i.e., while framing and when implementing as well as shown in Figure.

The plan is developed to establish deep roots that provide firm foundation for the constantUp-gradation of the institution, as well as to energize the drive of experimentation and innovation, keeping the focus on Institution vision and mission. The strategic plan sets out a frame work of priorities for the Institution.

The Chairman, Vice Chairman, Secretary and the members of the Governing Body have felt the need of preparing a strategic development plan for the institution in a formal written document format. The mandate was given to the Principal to develop strategic

plan 2018-2023 for the institution. The management & top leadership teammet and brain stormed on SWOC and stake holders' expectations. The Leadership team met anumber of times, deliberated in detail and arrived at vision, mission, and quality policy and core values for NEC. Environment scanning was done keeping vision in mind. The team also discussed about Institutes strategic High-Level Goals to be achieved by 2023.

Institution strategic goals formed the main theme for arriving at strategies, sub strategies androad to accomplish them. Each Strategy was deliberated and sub-strategies were arrivedtowards implementation plan. Implementation plan worked out all details such as budget, resources needed and leaders responsible to implement with time lines. This implementation is separately maintained by the head of the institution.

Departments play a pivotal for the institution; hence each department worked out on their vision, mission and short, mid & long term goals.The implementation plan for the departments also reflected all details such as budget, resources needed as well as leader responsible with time lines. HODs form the core team for implementing departmental goals under the guidance of Deans/Principal.

Strategic Development Plan emphasizes on evaluation measures, monitoring team along with deviation steps if any over a period of time. The evaluative components for each stake holder are clearly spelt out along with periodicity of performance evaluation reviews.

The final draft document was discussed with GB and after its detailed review; the suggestions were incorporated towards its effective implementation. This comprehensive plan forms the guiding plan for the years 2018-2023.

File Description	Documents
Upload strategic plan and deployment documents on the website	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.1.2-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.1.2-1.pdf</a>

## 6.2 - Strategy Development and Deployment

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

Yes, the Institute has a perspective strategic plan and deployment.

Institution has a strong Strategic plan aiming at clearly formulated objectives.

1. Effective teaching and learning process.
2. Student and faculty development and participation
3. Accreditation from statutory bodies.
4. Internal Quality Assurance System
5. Research and Development Work.
6. Social engagement and Community service.
7. Industrial and Alumni Interaction.
8. Physical infrastructure and facility.
9. Placement and Training.
10. Entrepreneurship.
11. Incubation Centers and Start-Ups.

The Strategic Plan ensures that the set targets are achieved through accountability process, comprising of review, evaluation, reporting and re-planning.

The Chairman, Vice Chairman, Secretary and the members of the Governing Body have felt the need of preparing a strategic development plan for the institution in a formal written document format. The mandate was given to the Principal to develop strategic plan 2018-2023 for the institution. The management & top leadership team met and brainstormed on SWOC and stake holders' expectations. The Leadership team met a number of times, deliberated in detail and arrived at vision,

mission, quality policy and core values for NEC. Environment scanning was done keeping vision in mind. The team also discussed about Institution strategic High-Level Goals to be achieved by 2023.

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The final draft document was discussed with GB and after its detailed review; the suggestions were incorporated towards its effective implementation. This comprehensive plan forms the guiding plan for the years 2018-2023.

The Perspective plan for the development of the institute is presented in additional information link.

File Description	Documents
Strategic Plan and deployment documents on the website	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.2.1-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.2.1-1.pdf</a>
Upload any additional information	No File Uploaded



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 institute has a clearly defined organizational hierarchy and structure to support decision making processes that are clear and consistent with its purposes and supports effective decision making. The organizational structure lends itself to sustaining institutional capacity and education effectiveness through involvement of stakeholders in various Boards.

The UGC/University provides guidelines for various Statutory Bodies for the functioning of the institute to fulfill its objectives

#### Governing Body:

The Governing Body has identified a few important parameters among others for envisaging the strategic plan to plan, implement monitor, evaluate and update the practices of institutions.

#### Academic Council:

The Academic Council is the highest academic body which decides and advices on all academic matters. Academic proposals of BOS from each department are scrutinized and approved with or without modifications by the academic council. It also recommends/advise the Governing Body on proposals for new programme of study and other academic matters. Academic council performs such other functions as may be assigned by the Governing Body.

#### Functions of Board of Studies:

1. The Board of Studies of a department in the institute shall:
2. Prepare syllabi for various courses keeping in view the objectives of the institute, interest of the stakeholders and national requirement, for consideration and approval of the Academic Council
3. Suggest methodologies for innovative teaching and evaluation techniques



4. Suggest panel of names to the Academic Council for appointment as paper setters, evaluators, examiners etc.
5. Coordinate research, teaching, extension and other academic activities in the department/college.
6. Elaborate discussions starting of new courses, programs etc.

**Functions of the Finance Committee:**

1. Budget estimates relating to income from fees and other sources.
2. Budget estimates relating to the grants received/receivable from the UGC/AICTE, if any, and income from fees, etc. collected for the activities to undertake the scheme of autonomy.
3. To seek all major and minor expenditure proposals from different committees, analyse them, establish the priorities and forward a tentative budget to GB in time.

The organization has a well-structured administrative setup with Governing Body as the highest decision making body and other functional bodies and committees.

The functions of various bodies are given in the link for additional information.

**Service rules, Procedures, Recruitment and Promotional Policies:**

Narasaraopeta Engineering College has defined policies which were developed with involvement of various stakeholders including Principal, members of Management and members of the Governing Body. The policy is revised and new policy amendments were brought in for the stakeholders.

The documents are published and are made available in the institute

library and in all departments to create awareness among the employees and students.

The above policies and procedures detailed information is available in Service Rules and Regulations & Administrative Manual is given in the link for additional information.

File Description	Documents
Paste link to Organogram on the institution webpage	Nil
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.2.2-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.2.2-1.pdf</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 Institution provides effective welfare measures to both teaching and non-teaching staff. All statutorywelfare measures are implemented. Various monetary, non-monetary measures towards personal andprofessional growth are being followed to the satisfaction of the employees. This creates a congenial atmosphere and enhances the work efficiency.

The list of existing welfare measures for teaching and non-teaching staff:

1. As per the norms of AICTE, 6th Pay commission recommendations are implemented.
2. All Teaching and Non-Teaching Staff are covered under General Insurance
3. Non-Teaching Staff are covered under EPF
4. Non-Teaching Staff are provided with ESI facilities
5. Maternity and Medical leaves are sanctioned for all the teaching and non-teaching staff.
6. Full time Medical facility with Qualified Doctor and Nurse in the Campus
7. Providing 12 Casual Leaves and 12 Earned Leaves for all the teaching and non-teaching staff for one academic year
8. Study Leaves are sanctioned for higher education and qualification improvement for all the teaching and non-teaching staff.
9. Financial Support to all the Staff members for their professional development activities.
10. Providing Concession for Tuition Fee of Staff children in our Institutions.
11. Availability of Free transport for all the staff.
12. Providing two to three weeks of summer vacation for all the teaching and non-teaching staff.
13. Financial encouragement for all the staff, who published their papers in reputed journals and patents
14. Providing Financial support to attend conferences / workshop and towards membership fee of professional bodies for all the staff.
15. Festival Bonus for all the non-teaching staff.
16. Providing Uniform for all the class IV non-teaching staff.
17. Free accommodation in campus for all the teaching and non-teaching staff.
18. The institute introduces new equipment and software in laboratories to improve practical skills and thus able to stand higher in their professional capabilities.
19. Institution has signed MOUs with various organizations with an objective of collaborative learning between Industry and Academia for improving technical skills of staff.
20. The institute provides food facilities in the Canteen at subsidized cost.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/6.3.1(1).pdf">https://www.nrtec.in/wp-content/uploads/2022/03/6.3.1(1).pdf</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**

82

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**

25

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.)**

120

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	<a href="#">View File</a>

## 6.4 - Financial Management and Resource Mobilization

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

Finance is lifeblood for every organisation. Effective financial Management will be ensured by regular audit of the financial transactions. NEC has a system of both internal and external audits for all the financial transactions carried out in the institute every financial year. Accounts department maintains financial accounts daily and prepares all financial statements and submits them to all statutory bodies like AICTE, UGC, JNTUK and State Government as and when required. Financial Planning is exercised well in advance for the organization and efficient Budgeting & Controlled mechanism is done by involving the various Academic Departments and Administrative Sections of the Institute. Financial planning and review is done in periodic intervals through Finance Committee headed by Principal, Administrative people and Account Personnel as members. Finance Committee meets two times a year and reviews the income- expenditure statements and suggest further action plan. Management through Governing Body looks in to income and expenditure pattern and pragmatic recommendations are given. Well-structured financial section is in place and every financial transaction is recorded through software. Financial Rules are in place in the Institute and "No- Cash" Transaction System is followed to the possible extent. Payment of fees is also done through online transaction. Optimal utilization and execution of the budget is monitored through internal and external auditing. The departmental budget is followed and the optimal utilization of funds and the monitoring of the budget are done through Internal and External Audit. Internal audit is conducted annually by the Internal audit committee constituted by the Principal. The internal audit is conducted on a Sampling basis to check the correctness of the financial transactions and statement affairs of the Institution. The Committee verifies Cashbook, Bank accounts, Ledgers, Bills, Vouchers, and statement of cash position and cash flow physically and conducts sample check on the heads of various accounts, balance dates, and postings. Statutory external audit is conducted annually

by chartered accountants. External Audit: With all statutory obligations duly complied, there were no major audit objections till the last audit. An effective Financial Management System is followed, which takes utmost care to follow the best accounting practices which give no chance for financial mismanagement. All funds received from government are audited separately by the Auditor appointed by government. Audited financial statements are made public by placing it on institute website.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/6.4.1(1).pdf">https://www.nrtec.in/wp-content/uploads/2022/03/6.4.1(1).pdf</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)

00

File Description	Documents
Annual statements of accounts	No File Uploaded
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

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

**Mobilization of Funds:**The primary goal of institution is the quality enhancement and the reputation of the Institution. The major source of revenue for the college is the Annual fee collected from students. The fee is collected as per the fee & guidelines fixed by the AP State fee regulatory authority. Mobilization of funds is also done through sponsored projects from DST, FIST, DRDO, AICTE, UGC, Industry sponsored projects by the faculty. Funds are also mobilized through consultancy and philanthropic contribution. **Strategies for optimal utilization of financial resources:** During the budget preparation in the institution all the academic and section heads are requested to provide the annual budget requirements keeping in

view of development and updating of laboratories, computing facilities, library, teaching-learning process, training, extension activities, software etc. The budget will be utilised to meet day-to-day operational and administrative expenses and maintenance of the fixed assets.

Department/ Section wise budget estimations are collected and Budget is prepared. The same is placed before the Finance committee and the committee in turn will deliberate and makes necessary changes. The same will be submitted to Governing Body for approval. The Governing Body further approves the budget.

#### RESOURCE MOBILISATION

The following are the different ways of mobilizing the funds in the Institution:

Tuition fee: The major source of revenue generation is tuition fees collected from students. The appropriate fee is fixed, as per the norms, by Fee Regulatory Authority of Govt.

#### RESOURCE UTILIZATION

The resources are utilized for the following as per the approved budget

Employee Salaries & benefits are a major component of expenditure

Furniture, Laboratory Equipment and Consumables, etc.

Establishing Centres of excellence and Industry Collaborative Labs

Library

R & D and Incentives

Skill Development and Innovation

Training & Placement

Software procurement, up-gradation, and maintenance

Wi-Fi, Internet & Networking

Student Services- NCC, NSS, Sports



Power and fuel

Printing and Stationery

Postage and telephones

Affiliation and Renewals

Travel and conveyance

Repair, Replacements, and Maintenance

Taxes and licenses

Scholarships to merit and poor students

Sanitation- housekeeping-

Gardening and security charges

Other miscellaneous expenses

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.4.3-1.pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.4.3-1.pdf</a>

## 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)

The college has Internal Quality Assurance Cell. The purpose behind its establishment is to sustain and propagate the quality in all the aspects of the college. It primarily functions for development of 'Quality Culture' in the college. It provides information on various quality parameters, obtains feedbacks from students on quality aspects. It prepares documents of various activities and programs. The cell prepares the Annual Quality Assurance Report (AQAR) as per

the NAAC guidelines and submits it to NAAC. The I.Q.A.C. comprises of members from student council, members from board of directors, experts, society representatives and alumni.

The I.Q.A.C. plays an important role in overall development of the college by framing various strategies and take remedial measures for progress. The following two examples can be highlighted as the best practices of the I.Q.A.C. with quality outcomes.

#### CASE STUDY 1: OBTAINING OF AUTONOMOUS STATUS

With the quest to provide quality education and to introduce industry relevant programmes that help students with wider opportunities for career and future prospects, Narasaraopeta Engineering College sought autonomy and was among the first few private and self-financed Institution to embrace Autonomous status by UGC in the year 2016.

The following are major initiatives adopted after Autonomy:

- CBCS and OBE schemes into the curriculum
- New Programmes have been introduced in collaboration with reputed institutions
- State of Art infrastructure and ICT facilities to fulfil the Programme requirements
- Administering a mechanism for streamlined monitoring of Teaching - Learning activities
- Enhanced Student Support
- Enhanced Research activities
- Instilling Human Values and Social Responsibility
- Introducing relevant reforms in evaluation process
- Administering Feedback and Analyzing the reports
- Conducting Internal and External Audits
- IQAC takes the responsibility of preparing the progress report at the end of each academic year to assess its progress and also coordinated for renewal of autonomous status in the year 2017.

#### CASE STUDY 2: Promotion for Research and Innovative activities

- Conduct of Faculty development programmes
- Promoting research by faculty
- Financial support is extended partially to those faculties who are pursuing research for purchase of equipment, materials required and for attending workshops /conferences.
- Due weightage is given for research in performance appraisal

system.

- Encouragement of faculty to participate in conferences to present papers, attend FDPs outside the college.
- Organizing workshops/seminars/conferences by the institution.
- Encouragement of students to participate in curricular, co-curricular and extra-curricular activities within and outside the college.
- Participation of student in Guest Lectures/Seminars/Workshops.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/6.5.1(1).pdf">https://www.nrtec.in/wp-content/uploads/2022/03/6.5.1(1).pdf</a>

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 techniques adopted by the IQAC to check periodically the Teaching learning process, structures & methodologies of operations and learning outcomes are as follows:

- College timings and discipline are strictly followed.
- Preparation of Time Table and unit/lesson planners.
- Providing infrastructure facilities for conducive teaching learning environment.
- Conducting bridge course for the students from other streams.
- Regular supervision of theory and practical classes.
- Monitoring attendance of the students and mentoring them.
- Checking teaching diary, academic records and attendance registers.
- Guest lectures, Seminars and industrial visits are organized.
- Arranging remedial classes for slow learners.
- Online feedback from students.
- Verifying the syllabus completion statement consolidated by the departments.

#### CASE STUDY 1: ADMINISTERING FEEDBACK FOR QUALITY ENHANCEMENT

The IQAC administers the online feedback from the students on

curriculum, teaching-learning, infrastructure facilities available, teacher quality and student support. This helps in analyzing the overall academic performance.

Few of the parameters that are taken into considerations are:

- Knowledge, enthusiasm and skills of faculty for the subject Communication skills and preparedness for the class with a range of appropriate pedagogies & technologies.
- Usage of different teaching aids such as black board, PPTs, Web resources, video links, case studies, etc.
- Usage of innovative strategies that offer opportunities for students with different learning styles to achieve.
- Professional interactions with students within and beyond the classroom.

#### CASE STUDY 2: ACADEMIC AUDIT

The Management in coordination with IQAC and Heads of Departments conducts a peer review as a part of Annual Quality Assurance Report (AQAR) once in a year to evaluate the continuous enrichment of teaching learning practices, Infrastructure and ICT facilities, teachers' quality and other effective parameters to extract the best from faculty and students for a quality education.

The Annual Quality Assurance Report comprises of Internal and External Audits to assess and analyze the academic and administrative compliance system.

1. The Internal Audit: Internal Annual Quality Assurance Report is conducted and interacts with the staff and the students to know the functioning of the college and looks for any improvement. It examines the accounts of the College. This practice helps in attending to the requirements of the College and seeking consent and approval of proposed new projects.
2. The External Audit: Experts from other institutions are invited to verify, assess and suggest for improvement objectively. Evaluative Reports of all departments, Committee/Cells Reports, Examination procedures, IQAC initiatives and procedures are examined, consolidated and compiled by the audit panel and an Executive Summary highlighting the strengths and suggestions for improvement is prepared which helps the institution to move ahead considering the recommendations for improvement.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.nrtec.in/wp-content/uploads/2022/02/6.5.2(1).pdf">https://www.nrtec.in/wp-content/uploads/2022/02/6.5.2(1).pdf</a>

**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="https://www.nrtec.in/wp-content/uploads/2022/dvv/6.5.3(1).pdf">https://www.nrtec.in/wp-content/uploads/2022/dvv/6.5.3(1).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	<a href="#">View File</a>

## **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

Gender equality is one of the key challenges facing in society today. The institute conducts regular gender equity promotion programs. Gender sensitivity is an inherent value in the cultural ethos of the institute and its neighbouring community, as is evident by the following facilities -

Institution shows gender sensitivity in providing facilities such as:

1. Safety and Security
2. Hi-Tech Surveillance system
3. Hostels
4. Medical Facilities
5. Girls rest Room
6. Counselling

**A. Safety & Security:**

The Institution has a special cell called student grievances redressal cell (SGRC) through which it addresses the student's grievances related to academic and non-academic matters, such as assessment, victimization, harassment by colleague students or teachers etc

**B. Hi-Tech Surveillance system:**

E- Surveillance with high resolution cameras through day and night facility of distributed recording has been set up in the campus, entry of unwanted element is monitored through these cameras. Adequate security forces are available in the college 24/7 throughout the campus and also in hostel that make sure that no untoward incident take place in the campus

The Institution has a high quality CCTV cameras installed all over the campus to track the activity of every student thus ensuring their safety inside the campus.

**C. Hostels:** There are different hostels for boys and girls. Students are monitored under a set of well defined rules and guidelines of wardens. All the students and staff were required to carry their ID cards on campus at all times, guaranteeing that no outsiders, including unauthorized individuals, were admitted. Wi-Fi enabled reading room is available in the women's hostel and the library.

**D. Medical Facilities:** Health centre with a qualified doctor and a nurse is available in the campus to provide medical care to the students. Specialists are also invited to visit the campus if necessary, nurse and other staff are also available in emergency.

**E. Girls Rest Room:** In each block of the campus, separate washrooms are available for girls and boys. Water is available in all the washrooms with proper ventilation. A separate girl's waiting room is also available with all the facilities, like first aid box, chairs, benches and newspapers.



**F. Counselling:**

NEC has consistently strived to address contemporary issues like gender sensitization, women concern, inferiority complex, peer group issues, teasing, ragging, safety and security etc. We counsel through the various seminars, workshops and awareness programs by guest lecturers and senior faculty. The anti-ragging committee and the head of the departments are vigilant and always available for students to bring forth their concerns and counsel them amicably.

The institution grooms the students to be competent, to have excellent interpersonal skills, problem-solving capabilities, leadership skills, tolerant and respectful of cultural differences, social conscience, and zero tolerance towards any kind of gender discrimination. The institution ensures the safety and security of both staff and students.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.nrtec.in/wp-content/uploads/2022/03/7.1.1.pdf">https://www.nrtec.in/wp-content/uploads/2022/03/7.1.1.pdf</a>

**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**

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

File Description	Documents
Geotagged Photographs	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

**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)**

The NSS unit of NEC has played a prominent role in this by organizing various awareness programs, conducting tree plantations and various other activities. Apart from these activities, the importance of waste management and methods of waste disposal



mechanism is taught to students through courses such as Environmental Studies, Solid waste Management etc. In NEC campus the following initiatives are taken towards the waste management are as follows:

#### Solid Waste Management

- The major solid waste materials generated in the college consists of horticultural waste, which include dried leaves or plant clippings from the lawn, paper, plastic, wrappers, glass, cardboard, and food wastes from canteen and hostel. Dustbins are positioned in each classroom, laboratory, rest room, canteen, and at different places in the campus. Sweepers are allotted to manage all of the waste generated in the campus. All waste/garbage from college and hostel is segregated at source and disposed of in a proper manner. The collected food waste is deposited in the biogas plants. The gas made out of the biogas plant is used for cooking purposes.

#### Liquid waste Management

- The major liquid waste consists of effluents from lavatories and the laboratories. These are collected in the separate septic pits and allowed to settle into the soil. Since the effluent pits are not located close to any water bodies and the college is situated in the soil area, the effluent water gets evidently filtered. The college has a proper drainage facility to drain off the excess liquid waste into the municipal drains safely to keep away from stagnation.

#### E-Waste Management

- Electronic goods are put to ultimate use; the minor repairs are carried out through the Laboratory assistants however the major repairs are carried out through the Technical Assistant and are reused. The equipment that cannot be refurbished is disassembled and segregated to send to recyclable units.
- E-waste generated in the campus is collected via the maintenance team and is appropriately disposed of through vendors. The students also gain awareness about E-waste management and its results via various seminars. Various aspects of E-Waste like disposal, sick effects, recycling, limitations, etc. have been mentioned in those seminars.

#### Chemical Waste

- The institution follows excellent laboratory practices to make

certain the protection of the personnel and adheres to a strict protocol of liquid waste disposal in its laboratories. Indiscriminate use of chemical compounds is discouraged all through practical training and laboratory liquid chemical wastes are effectively disposed of. Any glassware used with inside the laboratory is rinsed with water and located with inside the liquid waste container. Inorganic wastes which includes concentrated acidic or alkaline solutions are neutralized before disposal.

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	<a href="#">View File</a>

**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	<a href="#">View File</a>

**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>1. Green audit</li> <li>2. Energy audit</li> <li>3. Environment audit</li> <li>4. Clean and green campus recognitions/awards</li> <li>5. Beyond the campus environmental promotional activities</li> </ol>	A. Any 4 or all of the above
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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	No File Uploaded

<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, reader, scribe, soft copies of</b></p>	A. Any 4 or all of the above
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## 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	No File Uploaded
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).

Narasaraopeta Engineering College remains exemplary in executing cultural and social activities by providing an inclusive environment for the students. The purpose of conducting such events in the institute is to inculcate the sense of peace, equality & harmony among students. People of all cultural orientations work in harmony that is safe from abuse, harassment or unfair criticism. Everyone has freedom to express his/her own opinions and is given equal opportunity to participate in teaching, learning, work and social activities.

The Institute affirms pristine transparency by meritorious admissions indeed unbiased and keeps chances equally open to all students irrespective of the cast, creed, regions, and religion. The institute has an active student council and NSS wing to imbibe discipline, harmony and unity at ease. There is no segregation of students on the basis of their lingual or communal background and they feel safe and secured throughout.

Anti-ragging cell exerts to keep up harmony, tolerance and ready to take any measures. All round vigilance and surveillance prevail within the campus. Gender equality is ascertained and encouraged through mixed team sports, events, and leadership roles as well participation in all act of cultural, and social services to an extent of all most events. The renowned institute maintains the sense of respect towards all cultural and technical activities such as Jubliation, Swecha, Flash Mob, Radio FM.

Our institution commemorates Sri MokshagundamVisvesvarayya birth anniversary, honouring teachers on Teachers Day by reminding the

great guru Dr.Sarvepalli Radhakrishnan, and awareness programmes, Blood denotation camps, planting trees in near by villages to safe guard environment takes place in the institution.

The institute conducts hands on technical sessions as conveyed by eventual engineers and alumni for the students.which helps to create the bond among the students. Women's Day celebrations are encouraged every year among the women and girl students to take up leadership roles and participate actively in all student activities. To promote a sense of gender equality, many mixed team sports events are organized.

Experienced faculty deliver lectures with an acceptance and appreciation for different ideas, opinions and learning styles of the students and make an earnest effort to understand the racial and cultural characteristics of students. Besides curriculum, additional communication and soft skills classes along with team bounding activities are conducted to set aside the short comings and communicate professionally with technically jargons.

All national and state wide festivals are celebrated with full spirits. Pongal celebrations are celebrated with great ease and enthusiasm. This built unityand reliance among students.

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:

India is a country known for its myriad culture and traditions it includes people fromvarious walks of lives viz.,cultural,social,economic,linguistic,andethnicdiversitiesgoverne d and guided by the Constitution irrespective of caste, religion, race sex.

Narasaraopeta Engineering College sensitizes the students and the employees of theInstitution to the constitutional obligations about values, rights, duties, and responsibilities ofcitizens which enables them to conduct as a responsible citizen.

The college is known for its innovative excellence in academics and

is recognized for its human values and ethics. The students at NEC are sheltered under teacher's guidance and motivation, they are nurtured in self-learning and pave way for creative thinking and entrepreneurship. The first and the foremost criteria of NEC is to furnish students with knowledge, skill, and values that are necessary for sustaining one's balance between a livelihood and life and by empowering them with an educational experience where they can hone important skills for the future.

These elements are inculcated in the value system of the autonomous community which assiduously strait to make students aware through curriculum and extracurricular activities. In this regard students focus on various concepts related to Artificial Intelligence, Cyber Space, and Indian IT act serve as the electives.

The students are inspired by participating in various programs on culture, traditions, values, duties, and responsibilities by inviting eminent people. The institute conducted awareness programs by involving students to take the lead by planting trees, awareness on sanitary and hygiene, Swatch Bharat, etc.

In our institute women and girl students are taken immense care with utmost responsibility. Lady Police officer is invited as Chief Guest to address the female students on self-defence she encouraged how important the Disha App is and threw light on installation of the App. Guest lectures and workshops are arranged by eminent personalities to deliver lectures on ethics, values, duties, and responsibilities and on saving the environment. Ethical Values, rights, duties, and responsibilities of citizens are some of the topics that are enlisted in Elocution, debates, and class presentation which gives incredible experience and motivates the young minds to react and contribute in building the nation.

Celebration of National Days every year by the Institute takes place. The Institute celebrates Republic Day, and Independence Day on January 26 and August 15 respectively. The celebration is attended by Students, Teaching and Non-teaching Staff, Invitees, guests and any attendees. Flag hosting with National anthem and oath of national integrity followed by distribution of sweets is the regular decorum.

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	No File Uploaded



<p><b>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 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</b></p>	<p>A. All of the above</p>
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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	<a href="#">View File</a>

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

NEC as an institute of certain pristine principles and objectives guided by the faculty, management and some important wings which are inclined to conduct some national festivals, birth anniversaries of national leaders and create awareness on nationalism, Independence day and republic day are celebrated every year. Celebration of these festivals commemorates the sacrifices of our great leaders and freedom fighters who laid down their lives in the foundation of this country. It also helps to cherish the thoughts and ideologies of the great personalities of our nation. It is our national festival which unites the whole country for celebrating under one roof portraying national unity and patriotism.

The institution remembers the birth/death anniversaries of great Indian personalities like Mahatma Gandhi, Dr.A.P.JAbdul Kalam, Dr.Babasaheb Ambedkar. etc on these auspicious day eminent guest are invited as spokesperson to share views and throw light on their sacrifices laid for the wellbeing of the nation.

The institute conducts technical fest and engineers day annually



where students exhibit their hidden talents by involving in different technical activities such as paper presentation, poster presentation, Group discussion and Seminars. In our college all national festivals are celebrated with great enthusiasm to inculcate a sense of patriotism among students. Students are given an opportunity a platform is being set to express their patriotism during national festivals and also to bring out the hidden talents among the students cultural programs like dance, musical concepts skits and speeches are conducted.

Short films and photography are encouraged to impart confidence amid them. NSS unit organizes many awareness events and welcomes students in blood donation campaigns etc., NSS unit takes the responsibility to address the prevailing social issues. Where students participate with zeal and reasonability.

Women's day is being observed on March 8 as a mark of respect to women owing to their courageous endeavour in personal and professional life. Few competitions are conducted for girl students and police officer is invited to enhance and to empower them. The institute takes pride to conduct Gandhi Jayanthi in commemoration the father of the nation who is known for AHIMSA, TRUTH and simplicity.

National education day is conducted on the birth anniversary of Dr .APJ Kalam. In this regard the institute conducts various competitions like essay writing and elocution. International Yoga day is observed every year, students and staff participate whole heartedly. All national festivals are celebrated with reverence to build unity, among people of different racial and cultural backgrounds. Apart from these, many events and guest lectures are regularly organized to in still a sense of national pride and gratitude towards sacrifices of great leaders of our country.

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	No File Uploaded
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

#### Best Practice - 1

**Title: Teaching and Learning Process**

#### Objectives:

Narasaraopeta Engineering College (NEC) desires to impart appropriate knowledge; skill and training to enable the students become qualitative practitioners of their profession. Teaching and learning process is the focal point in the whole of educational activity. Changing face of education and rapid advancement of technology on one hand and changing perceptions among the millennial students as well as induction of new generation of teachers on the other hand challenge the whole gamut of teaching learning process. The crux of this practice is to train the facilitators in better teaching learning processes for enhanced deliverance of learning.

#### The Context:

In the past few decades, there has been a paradigm shift in teaching methodologies. It has moved from teacher centric approach where the learner is a passive participant to student centric approach where a teacher is just a facilitator to student's learning. In addition, the massive advancement of science and technology coupled with the expectation from native millennial student generation, has impacted and shaken the concept of teaching. Often, those joining the teaching community recently are also of millennial generation. In this context, it is imperative that the teachers are trained appropriately to carry forward the teaching learning process in an effective and smooth way. The shift in generational outlook, that is, the young tech savvy brigade joining the ranks of teaching and older generation teachers who need to become more versed with technology, can be achieved only through timely and interventional training.

#### The Practice:

Since its inception, NEC has taken measures to ensure that teachers are adequately trained in the teaching methodologies. In this regard, faculty development programmes for teacher training are continuously conducted; the resource persons for these programmes may be from reputed Educational Institutions or the senior faculty members within the campus. Sometimes, teachers are given an opportunity to attend such programmes outside the campus. At NEC,

newly recruited faculty members having less than two years teaching experience are given orientation by the senior professors. In 2019, the institute has organised a teacher-training programme on Effective Teaching along with the National Institute of Technical Teachers Training and Research (NITTTR) Kolkata. Fifty faculty members along with newly recruited, attended the programme. The feedback on the programme suggests that the training session was productive in terms of supporting teachers understanding their perceptions of class room teaching, methods of assessment and evaluation.

Many faculty members were encouraged to do AICTE-NITT Module 5 'Technology enabled learning and lifelong self-learning' during COVID break in March- April 2020. This course was pretty useful for both inexperienced and experienced faculty as the module focussed on the teaching methods using available technical resources.

#### Evidences of Success:

The faculty with less than two years become more confident in handling the classes. The perspective shift from a student to a faculty is visible as most often, the newly joined faculty are also millennial. They are tech savvy but their outlook towards teaching is not a very informed one.

The lockdown during pandemic was a game changer. The above initiatives helped the faculty to adapt online teaching in no time during the pandemic. The faculty became versatile in implementing active teaching learning methodologies using the technology. The awareness ignited the adaptability and explorative nature of the faculty that was evident in the successful implementation of online teaching learning.

The reluctance to use technology or collaborative teaching methods among the seniors has slowly given way to a more positive acceptance. They are implementing quiz, peer teaching, group or team learning and flipped classroom methods. Blended classroom has been a boon in the post COVID situation. Classes were conducted in both online and off line format.

#### Problems encountered:

Many problems are encountered while implementing teaching learning development activities.

1. In flipped class room, students may not be given to advance

preparation of the topic. They may skip the pre task assigned by the faculty thereby attending the class with zero prior knowledge that leads ineffectual learning.

2. Prior preparation by the students may create or promote unhealthy digital divide among the students.
3. Use of technology in blended learning can cause cognitive overload on the learners.
4. Also, IT literacy among the faculty is one of major disadvantages in adapting new technology in learning.
5. The faculty may not be able to keep pace with the student's learning who has advance knowledge of the topics.
6. All students may not have suitable access to technology or internet bandwidth. Despite adapting latest methods in teaching learning, we cannot ignore the fundamental chalk and talk method. NEC tries to maintain a fine balance between the old and new versions of teaching learning.

## Best Practice II

Title: Go Green Campus

### Goal

Environmental issues bring about thoughtful questions on the roles of Institutes in society. Irrespective of whether they are contributing to a better environment or worsening it, Institutions have to acknowledge environmental or green issues through impact research and measurement. Based on the approach NEC has significant Green Initiatives to

1. Promote sustainability by creating awareness
2. Share knowledge & expertise - Expert talks about environmental problems and possible solutions

Deploy eco-friendly technologies for greening and cleaning our campuses

Context:

The main contexts are (i) Water Management, (ii) Waste management, (iii) Energy (conservation and generation) and (iv) Landscaping and Trees. (v) Beyond the Campus Environmental promotional activities. (vi) Green, Environment and Energy Audits.

Practice:

Energy conservation

1. The Internal stakeholders take all measures to save the power.
2. More than 60% lighting requirements are met through LED sources and efforts are under progress to improve it further

Use of renewable energy

Interactive solar power generating system of 200 KW is provided on the rooftop of the academic buildings. With the installation of this system, 45 to 50% of the total electricity requirement is met. It also has additional advantages like:

Water Conservation: According to reports, water conservation is important because fresh clean water is a limited resource, as well as a costly one. The goals of water conservation efforts include ensuring availability of water for future generations where the withdrawal of fresh water from an ecosystem does not exceed its natural replacement rate. Energy conservation as water pumping, delivery and wastewater treatment facilities consume a significant amount of energy. According to recent researches 15% of total electricity consumption is devoted to water management.

Rainwater Harvesting is the most important yet neglected resource. The reason is being very low cost. However, over period of years, water is gaining its importance. Entire country is facing a tremendous stress due to water scarcity. Irregular rainfall, depleting ground water table, inefficient usage etc are all forcing people to adopt water management activities. NEC has always paid special care and attention towards water consumption in their buildings. To tackle the issue at source, rain water harvesting systems have implemented across the campus to conserve, capture and aid effective aquifer recharge.

The campus has the potential to capture 762 cu.m volume of run-off water. To ensure effective capture and aquifer recharge, there are four rainwater-harvesting pits of dimensions 4\*4\*9 feet near each of the building in the campus and the runoff is directed to the pit through pipelines and storm drains. The water from the rooftop of



the engineering sheds is collected via gutters provided and diverted into a storage tank near the block is used for plantation purposes. The pits are regularly maintained by backwashing and replacing the layers of sand and gravel materials.

**Domestic Water Consumption:** The Campus' water requirements are met by bore well & through Storage Reservoir water line. Bore well water consumption of the faculty is around 23KL per day. The water consumption is proposed for reduction by introduction of low flow water fixtures. The initiative has a potential to save around 20-35% of the domestic water requirements. The management is also considering low cost yet effective measures such as flush bob adjustments in the flush tanks & installation of flow restrictors/aerators for the taps to further reduce potable water dependency. The campus disposes both Grey and Black waste waters to the naturally available sewer drains.

#### Efforts for carbon neutrality

By conserving and reusing energy the need for excessive use of oil fuels can greatly reduce, thus reducing carbon emissions. Installing solar panels helps in reducing carbon emissions. The installation of 200 KW solar power system has saved the amount of carbon dioxide released into the air. Thus, the emission of carbon dioxide is well controlled with these efforts in the institute to achieve carbon neutrality.

#### Plantation

Every year students along with the garden staff plant trees. Plantation drives are organized by NSS. Due to this program over the years, the campus has become lush and green.

#### E-waste management

E-waste generated is reused in the campus and replaced with buy back policy. In addition, following activities are promoted to ensure green campus:

Sensor based Environmental-monitoring system prepared by students:

Sensor based Automatic Street light

Beyond the campus environmental promotional activities (NSS)

Green, Environment and Energy Audits

File Description	Documents
Best practices in the Institutional website	<a href="https://www.nrtec.in/internal-quality-assurance-cell/#best-practices">https://www.nrtec.in/internal-quality-assurance-cell/#best-practices</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)

" We live in an age of innovation, where digital technology is providing solutions to problems before we have even realised we needed them. We see it every day as we find new ways to travel, eat and shop."David Lidington

" Education is simply the soul of a society as it passes from one generation to another" - G.K Chesterson

"The function of education is to teach one to think intensively and to think critically. Intelligence plus character - that is the goal of true education". - Martin Luther King

"Education is the most powerful weapon which you can use to change the world" - Nelson Mandela.

Mission of the institution is to impart value-based quality education. Since its inception, NEC is striving towards achieving the mission by providing world - class education to the students and preparing them to become new - age leaders. The institution is always under the guidance of visionary Chairman Sri.

MittapalliVenkataKoteswara Rao who recognised the rapid pace by which technology is evolving in the 21st Century and is striving to create the innovators and critical thinkers who can help our region and the nation with the help of a team of dedicated faculty members.

The thrust areas focused to achieve "VISION" are

- Outcome Based Education.
- Training of faculty and students in Latest Technologies.



- Societal relevant problems.

To achieve the vision, the institute has identified the thrust areas and established various labs in association with Industries, Govt. & Pvt Sectors thereby realizing a comprehensive outcome based model with required skill sets and social consciousness to make them industry ready professionals.

Out of the thrust areas mentioned above the Institute has a distinction by establishing several Centres of Excellence (CoE) and Industry Collaborative Laboratories. The institute has established 4CoEs and the details are described below.

#### CENTERS OF EXCELLENCE (CoE):

- APSSDC in collaboration with German Multinational Company Siemens, sanctioned a "CM Center of Excellence " to bridge the skill gap between the colleges and the industry requirement. This CoE is equipping students with the required competencies to suit industry needs & expectations. 37 laptops were provided under this scheme. Students were trained in courses like Python, IOT, Revit structures, Auto CAD, PCB&PLC.
- APSSDC in collaboration with Dassault systems, setup a 3D-EXPERIENCE center to make students industry ready in the field of Automotive, Aerospace & Defense and shipbuilding. The center enhances the employability skills of engineering & polytechnic students by making them industry ready through skill enhancement and certification on the 3D-EXPERIENCE platform consisting of 3 modules-Catia, Simulia&Delmia which are useful for 3D design, analysis & simulation of objects.
- An Indo-European skilling Centre for Mechatronics & Industrial Robotics lab was established on 2nd November, 2019 by APSSDC in collaboration with GC German Centre for engineering & Management studies, Germany & European Centre for Mechatronics APS GmbH Aachen to establish a framework for initiating innovation models. It consists of 3 modules-ARC 1.0,2.0& 3.0. ECE, EEE&ME students of 85 members are undergone training on ARC Modules. Faculty members are sent to Germany for training on ARC Modules.
- Microsoft Innovation Centre: The College has MOU with Microsoft Pvt Ltd for established Microsoft Innovation Centre. It has equipped with the Promotional material, Technical content and educational content& curriculum. Microsoft provide the royalty free licence software like Microsoft Office 365, Microsoft Visual Studio, SQL Server, Windows server, etc. and to use the Microsoft trade mark solely as part of the

Microsoft innovation centre organised Technical Training & certification Programmes.

#### ICTACADEMY:

ICT Academy is an initiative of the Government of India in collaboration with the state Governments and Industries. ICT Academy is a not-for-profit society, the first of its kind pioneer venture under the Public-Private-Partnership (PPP) model that endeavours to train the higher education teachers and students thereby exercises on developing the next generation teachers and industry ready students. To bridge the Industry-Academia skill gap, and to develop the next generation teachers & students. ICT Academy providing consultancy and training through industry specific research thereby creating a new generation of talent pool.

IUCEE (Indo Universal Collaboration in Engineering Education): NEC has a consortium member of IUCEE in 2018. As a consortium member, Faculty got a chance to attend a series of webinars to upgrade Technology and Teaching Learning Process.

#### NSS Activities:

In autonomous regulations, participation in NSS is made mandatory for all students. NSS unit in the college to involve entire student community in serving the society. The institute, through NSS units, organizes various activities for the benefit of the society and there by inculcating the service motto in the students. Some of the activities by NSS units:

1. Conducted Online Quiz Program on the eve of International Day of Yoga on 21-06-2020 at NEC Campus premises.
2. Conducted a "Free Covid-19 Testing Program" to faculty and students on 16-12-2020.
3. Conducted Chlorination Program at Yallamanda village on 03-01-2021.
4. Donating Fruits and Bread at Little Hearts Children Welfare Society, Prakash Nagar, Narasaraopet on 05-01-2021.
5. Conducted an Essay Writing Competition on the eve of Birth Anniversary of Swami Vivekananda Jayantion 12-01-2021.
6. Conducted an Awareness Program on National Voter's Day on 25-01-2021.
7. Conducted Pulse Polio Vaccination Program on 31-01-2021 at Yallamanda village.
8. Conducted National Road Safety Month Program on 12-02-2021.
9. Conducted International Women's Day Celebration on 08-03-2021.

10. Celebration of World Water Day on 22-03-2021.
11. Organized a Free Blood Grouping Test Program to all B.Tech, MBA and MCA students.
12. Conducted an Awareness Program on Anti Drugs Abuse Act on 10-04-2021.

File Description	Documents
Appropriate link in the institutional website	Nil
Any other relevant information	<a href="#">View File</a>

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

- Planning to apply external funding projects to various organizations and industries.
- Planning to have MOUs with reputed institutions and industries.
- Encouraging faculty to increase publications in SCI/Scopus indexed journal and conferences
- planning to start new courses in emerging areas.
- Planning to apply for renewal of accreditation of NBA, NAAC and Autonomous.
- Planning to participate in national ranking system like NIRF etc. conducted by Government and other reputed agencies
- Planning to strengthen R&D by subscribing various International Journals and providing seed money.
- Planning to organize more certificate courses, workshops, and short term courses on latest technologies
- Planning to increase the number participation in online certification courses such as SWAYAM NPTEL, MOOCs Etc.
- Organizing Campus Recruitment Training programs with reputed organizations to the students to enhance their employability skills.
- Engineering skills labs are proposed to introduce at 3rd and 4th year B.Tech level under R20 curriculum
- Encouraging students by enhancing number of internships and

industry related projects

- Planning to have industry supported laboratories to bridge the gap between academia and industry
- Infrastructure towards startups in the campus are planned with the support of NIDHI-TBI at newly constructed floor in Block-3

NAAC