

ANNUAL QUALITY ASSURANCE REPORT

2016-2017

National Assessment and Accreditation Council

Bangalore-560 072

Submitted by



NARASARAOPETA ENGINEERING COLLEGE, NARASARAOPET
(Autonomous)

Approved by AICTE, Permanently Affiliated to JNTUK, Kakinada.

Accredited by NAAC with A grade & NBA

Kotappakonda Road, Yellamanda (Post), Narasaraopet – 522601, Guntur district,
Andhra Pradesh

Phone No. : 08647-239904, Fax No. : 08647-239902

INDEX

| DESCRIPTION | PAGE NOS. |
|-----------------------|------------------|
| Part-A | 3-9 |
| Part-B | |
| Criterion-I | 10,11 |
| Criterion-II | 12-14 |
| Criterion-III | 15-19 |
| Criterion-IV | 20-22 |
| Criterion-V | 23-26 |
| Criterion-VI | 27-34 |
| Criterion-VII | 35-38 |
| Criterion-VIII | 39 |

The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

Part – A

1. Details of the Institution

1.1 Name of the Institution

Narasaraopeta Engineering College

1.2 Address Line 1

Kotappakonda Road

Address Line 2

Yellamanda Post

City/Town

Narasaraopet

State

Andra Pradesh

Pin Code

522601

Institution e-mail address

principal@nrtec.ac.in

Contact Nos.

9441895535

Name of the Head of the Institution:

Dr.M. Sreenivasa Kumar

Tel. No. with STD Code:

08647-239904

Mobile:

9440757039

Name of the IQAC Co-ordinator:

Dr.S.B.Venkata Siva

Mobile:

9692464540

IQAC e-mail address:

neciqa@gmail.com

1.3 NAAC Track ID (For ex. MHCOGN 18879) APCOGN20000, dated 22.1.2014

1.4 NAAC Executive Committee No. & Date:

(For Example EC/32/A&A/143 dated 3-5-2004.
This EC no. is available in the right corner- bottom
of your institution's Accreditation Certificate)

EC(SC)/05/A&A/057

1.5 Website address:

www.nrtec.ac.in

Web-link of the AQAR:

<http://www.nrtec.ac.in/wp-content/uploads/2018/08/AQAR-16-17.pdf>

For ex. <http://www.ladykeanecollege.edu.in/AQAR2012-13.doc>

1.6 Accreditation Details

| Sl. No. | Cycle | Grade | CGPA | Year of Accreditation | Validity Period |
|---------|-----------------------|-------|------|-----------------------|-----------------|
| 1 | 1 st Cycle | A | 3.05 | 3-3-2015 | 2-3-2020 |
| 2 | 2 nd Cycle | | | | |
| 3 | 3 rd Cycle | | | | |
| 4 | 4 th Cycle | | | | |

1.7 Date of Establishment of IQAC : DD/MM/YYYY

20/12/2012

2016-17

1.8 AQAR for the year (for example 2010-11)

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((for example AQAR 2010-11 submitted to NAAC on 12-10-2011)

AQAR 2015-16 submitted to NAAC on 06-09-2018.

1.10 Institutional Status

University State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution Yes No

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.11 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) Engineering Health Science Management

Others (Specify)

MCA

1.12 Name of the Affiliating University (for the Colleges)

JNTU Kakinada

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University

University with Potential for Excellence UGC-CPE

DST Star Scheme UGC-CE

UGC-Special Assistance Programme DST-FIST

UGC-Innovative PG programmes Any other (*Specify*)

UGC-COP Programmes

2. IQAC Composition and Activities

2.1 No. of Teachers

2.2 No. of Administrative/Technical staff

2.3 No. of students

2.4 No. of Management representatives

2.5 No. of Alumni

2.6 No. of any other stakeholder and
Community representatives

2.7 No. of Employers/ Industrialists

2.8 No. of other External Experts

2.9 Total No. of members

2.10 No. of IQAC meetings held 2

2.11 No. of meetings with various stakeholders: No. Faculty

Non-Teaching Staff Students Alumni Others

2.12 Has IQAC received any funding from UGC during the year? Yes No

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National State Institution Level

(ii) Themes

NBA-SAR Report preparation
Outcome based education
CRT Classes on Soft skills
CRT Classes on Career Empowerment
Entrepreneurship awareness program
Workshops on Learning Process and Learning Styles

2.14 Significant Activities and contributions made by IQAC

- Quality parameters developed for various academic / administrative activities of the institute.
- Formation of BOS for different departments for designing and preparation of curriculum under Autonomous scheme.
- Assessing the quality parameters and providing required suggestions for the improvement.
- Arranging FDP'S for newly joined faculty
- Conducting seminars / workshops, FDPs, Guest Lectures, training / certification programmes on quality related issues
- Implementation of Outcomes Measurement for the courses in the Programme
- Evaluation of existing teaching learning systems and related documents

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

| Plan of Action | Achievements |
|---|--|
| Since College has been Accorded Autonomous status to constitute statutory committees | As per the guidelines of UGC/JNTUK all the statutory committees such as Governing body, College Academic Council, Finance committee were constituted. |
| To design and develop curriculum for all departments | Prepared syllabus and academic regulations under Autonomous scheme for all the courses. |
| To Monitor Teaching Learning process | <ul style="list-style-type: none"> Academic Audit is done at the end of every semester. |
| To get re accreditation by NBA for eligible B.Tech programs | <ul style="list-style-type: none"> Online SAR is submitted and waiting for visit of expert committee. |
| To obtain feedback from stake holders for designing the curriculum. | <ul style="list-style-type: none"> Feedback obtained from students, Faculty, Parents, Alumni, Industry for designing curriculum under autonomous scheme. |
| To Encourage R&D and Consultancy, Establishing advanced / research labs / centres, setting up new experiments on latest technologies. | <ul style="list-style-type: none"> Mechanical Engineering, Electronics and Communication Engineering, Computer Science Engineering departments have been recognized as research centers by JNTUK, Kakinada Consultancy services provided by all Engineering departments. |
| Conducting Faculty Development Programs on Emerging technologies. | <ul style="list-style-type: none"> 03 Faculty development Programs are organized. |
| Communication with Parents | <ul style="list-style-type: none"> Letters with particulars of Percentage of attendance, Mid- exam marks, SGPA and Backlogs have been sent. Percentage of student attendance is improved |
| To send SMS alert to the parents about progress | <ul style="list-style-type: none"> Alerts of Attendance and performance of students are sent to the parents. Communication with Parents is done through SMS. |
| Online Certification courses | <ul style="list-style-type: none"> Students Participated in C Programming Certification Students Participated in MTA Certification by Microsoft Students and Faculty have participated in NPTEL courses certification |
| To improve technical activities | <ul style="list-style-type: none"> National Level Techfest “JUBILATION-2K17” was organized in January 2017. Project Expo was organized in the institute in the |

| | |
|--|--|
| | month of March 2017 • International conferences are organized the departments of ECE and CSE. |
|--|--|

2.15 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

Placed in Governing Body meeting held on 01-07-2017

Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

| Level of the Programme | Number of existing Programmes | Number of programmes added during the year | Number of self-financing programmes | Number of value added / Career Oriented programmes |
|------------------------|-------------------------------|--|-------------------------------------|--|
| PhD | - | - | | - |
| PG | 10 M.Tech-8 MBA, MCA | | 10 | - |
| UG | 5 (B.Tech) | - | 5 | 12 |
| PG Diploma | - | - | - | - |
| Advanced Diploma | - | - | - | - |
| Diploma | - | - | - | - |
| Certificate | - | - | - | - |
| Others | - | - | - | - |
| Total | 15 | | 15 | |

| | | | | |
|-------------------|--|--|--|--|
| Interdisciplinary | | | | |
| Innovative | | | | |

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

Being an affiliated college to JNTU Kakinada, there is a flexibility of electives and core subjects.

(ii) Pattern of programmes:

| Pattern | Number of programmes |
|-----------|----------------------|
| Semester | UG-5, PG10 |
| Trimester | |
| Annual | |

1.3 Feedback from stakeholders* Alumni Parents Employers Students
(On all aspects)

Mode of feedback: Online Manual Co-operating schools (for PEI)

****Please provide an analysis of the feedback in the Annexure***

- Departments take feedback from the students during the course work and also at the time of exit.
- Feedback is taken from the students/ Alumni /Employers/ parents by conducting separate meetings to design the new curriculum from 2016-17 under Autonomous scheme.

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

Yes, the syllabus is designed by the college under Autonomous scheme and the existing syllabus is also revised by the university from the academic year 2016-17.

The following are the few salient features of curriculum under Autonomous scheme.

- To give more choice of subjects to students 3 open electives and 5 professional electives are offered.
- Mini projects are introduced from second year itself.
- Practical training /internship is made mandatory.
- Professional skill development lab is introduced.
- Comprehensive VIVA is introduced in M.Tech program.
- Mandatory courses like quantitative aptitude and reasoning; verbal ability and advanced communication skills, MOOCS, NSS, Sports and Games, Yoga and meditation were introduced.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Incubation centre is established to promote entrepreneurship activities and convert the ideas of students in to start-ups.

Research centres are established in the departments of CSE, ECE and ME with approval from JNTUK.

Criterion – II

2. Teaching, Learning and Evaluation

| | | | | | |
|------------------------------------|-------|-----------------|----------------------|------------|--------|
| 2.1 Total No. of permanent faculty | Total | Asst.Professors | Associate Professors | Professors | Others |
| | 322 | 223 | 60 | 39 | |

2.2 No. of permanent faculty with Ph.D.

| | | | | | | | | | | |
|---|------------------|---|----------------------|---|------------|---|--------|---|-------|---|
| 2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year | Asst. Professors | | Associate Professors | | Professors | | Others | | Total | |
| | R | V | R | V | R | V | R | V | R | V |
| | 56 | | 3 | | 8 | | | | 67 | |

2.4 No. of Guest and Visiting faculty and Temporary faculty

2.5 Faculty participation in conferences and symposia:

| No. of Faculty | International level | National level | State level |
|------------------|---------------------|----------------|-------------|
| Attended | 87 | 9 | - |
| Presented papers | 87 | 9 | - |
| Resource Persons | - | - | 1 |

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- NPTEL lectures are made available in digital library to encourage self learning
- Display of detailed teaching plans with Course outcomes and evaluation mechanism is encouraged.
- Spoken tutorials from IIT Bombay.
- Use of ICT and modern pedagogical techniques.
- Online courses from Schollars university USA
- E-Journals are subscribed for enhancement of knowledge and latest information.
- Skill development training programs from APSSDC and other industries.
- Special arrangement of classes on Aptitude and communication skills.
- A good number of video lessons (NPTEL & MOOCS) are available and they are being used for the better understanding of the subjects.
- Adopted Outcome based approach.

2.7 Total No. of actual teaching days during this academic year

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

- Continuous evaluation on day to day basis is adopted. Assignments, online tests, mini projects are introduced.
- Weightage for two mid examinations rather taking the best mid performance.
- Paper setting and evaluation is done by external faculty.
- Online test with multiple choice are introduced.
- Bar coding is adopted.

2.9 No. of faculty members involved in curriculum Restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

| | | |
|----|--|--|
| 78 | | |
|----|--|--|

2.10 Average percentage of attendance of students

| |
|----|
| 81 |
|----|

2.11 Course/Programme wise distribution of pass percentage:

| Title of the Programme | Total no. of students appeared | Division | | | | |
|------------------------|--------------------------------|---------------|-------|-------|-------|--------|
| | | Distinction % | I % | II % | III % | Pass % |
| B.Tech Mechanical | 177 | 36.89 | 62.13 | 0.097 | - | 58.19 |
| B.Tech ECE | 191 | 52.35 | 35.07 | 2.61 | - | 90.05 |
| B.Tech CSE | 109 | 45.8 | 30.27 | | | 76.14 |
| B.Tech EEE | 61 | 34.42 | 40.98 | - | - | 75.40 |
| B.Tech Civil | 111 | 50.48 | 30.63 | 1.8 | - | 82.88 |
| MCA | 58 | 72.4 | 22.4 | - | - | 94.8 |
| MBA | 161 | 46.58 | 33.54 | 4.3 | - | 84.47 |
| M.Tech DECS | 10 | 50 | 10 | | | 60 |
| M.Tech DSCE | 3 | - | - | - | - | - |
| M.Tech P&ID | 5 | 80 | - | - | - | 80 |
| M.Tech PEED | 10 | 10 | 20 | - | - | 30 |
| M.Tech CAD/CAM | 2 | - | - | - | - | - |
| M.Tech TE | 2 | - | - | - | - | - |
| M.Tech CSE | 10 | 70 | | | | 70 |
| M.Tech Structural | 14 | 57.14 | - | - | - | 57.14 |

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- Monitors and evaluates the Teaching and learning processes by way of conducting the periodical meetings with HoDs etc.
- Collects the project reports randomly from the departments and evaluates the quality of reports and same will be submitted for the discussion at IQAC meetings
- Collects course files randomly and assesses the process followed and the attainment of Course Outcomes
- Organising remedial classes for slow learners.
- Conducting seminars for improving student communication skills.
- Identifies the new methods of teaching adopted by the faculty and shares the same among the faculty
- Conducts workshops on the teaching-learning process
- Prepares action Report and the Principal takes necessary steps to implement them

2.13 Initiatives undertaken towards faculty development

| <i>Faculty / Staff Development Programmes</i> | <i>Number of faculty benefitted</i> |
|--|-------------------------------------|
| Refresher courses | 0 |
| UGC – Faculty Improvement Programme | 0 |
| HRD programmes | 0 |
| Orientation programmes | 0 |
| Faculty exchange programme | 0 |
| Staff training conducted by the university | 1 |
| Staff training conducted by other institutions | 12 |
| Summer / Winter schools, Workshops, etc. | 33 |
| Others | 5 |

2.14 Details of Administrative and Technical staff

| Category | Number of Permanent Employees | Number of Vacant Positions | Number of permanent positions filled during the Year | Number of positions filled temporarily |
|----------------------|-------------------------------|----------------------------|--|--|
| Administrative Staff | 48 | | | |
| Technical Staff | 36 | | | |

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

The goal is to involve the entire faculties on research activities and motivate them for further improvement in research career. Encouraging young faculty to register for their doctoral degree. As a result two faculty have received Ph.D degrees in this academic year and around 28 faculties are pursuing their Ph.D program in different universities. The institute is providing good infrastructure, equipment's, journals, guest lectures by eminent Professors, seminars, workshops, digital library with required internet facility etc, to meet the needs of research work. It is commendable that the college provides seed money for the deserving candidates to carry research. We are also providing financial assistance to the researchers where ever required such as conference registration, workshops and contingency. All these activities are monitored by our strong research advisory committee.

Recognizing the above the JNTUK has approved research centres in the departments of ECE, CSE, ME. This will enable the senior professors to guide the scholars thus improving the research environment in the college.

The College has taken several steps to promote research culture among both the faculty and students. The project work is organized for the students in the curriculum of PG and UG courses which helps the students to absorb research aptitude and broaden their perspective on their subjects. Students are encouraged to present their research papers in different symposia/conferences organized by the college as well as outside. As a result our UG students have presented around 95 papers and won many prizes. Our PG students have presented their research papers in international conferences.

Our broad area of research includes, data mining, network security, mobile computing, global positioning system, embedded systems, VLSI, image and signal processing, power systems and power electronics, composite materials, biofuels, Geo polymers, Waste material utilization in concrete etc. Each department has a Department research committee, which convene periodical meetings to review project reports and other research papers presented by PG/UG students.

- Encouraging the faculty to pursue higher education.
- Encouraging faculty to publish quality research papers in referred journals and conferences etc.
- Categorization of the projects undertaken by the final year students into three categories: Industry based, Research based and Automation based.
- QEEE(Quality Enhancement in Engineering Education) Lectures delivered in the institute in almost all the branches of UG

3.2 Details regarding major projects

| | Completed | Ongoing | Sanctioned | Submitted |
|---------------------|-----------|---------|------------|-----------|
| Number | - | - | - | - |
| Outlay in Rs. Lakhs | - | - | - | - |

3.3 Details regarding minor projects

| | Completed | Ongoing | Sanctioned | Submitted |
|---------------------|-----------|---------|------------|-----------|
| Number | 1 | - | - | - |
| Outlay in Rs. Lakhs | 1.8 | - | - | - |

3.4 Details on research publications

| | International | National | Others |
|--------------------------|---------------|----------|--------|
| Peer Review Journals | 76 | 1 | - |
| Non-Peer Review Journals | - | - | - |
| e-Journals | - | - | - |
| Conference proceedings | 87 | 19 | - |

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

| Nature of the Project | Duration Year | Name of the funding Agency | Total grant sanctioned | Received |
|--|---------------|----------------------------|------------------------|----------|
| Major projects | | | | |
| Minor Projects | | | | |
| Novel synthetic methodologies for the synthesis of indazole and pyrazole fused phthalazine derivatives and their biological evaluation | 2 | UGC | 1.8 Lakh | 1.0 Lakh |
| Interdisciplinary Projects | | | | |
| Industry sponsored | | | | |
| Projects sponsored by the University/ College | | | | |
| Students research projects (other than compulsory by the University) | | | | |
| Any other(Specify) MODOROBS | 1 | AICTE | 18.9 Lakh | 18.9Lakh |
| Total | | | | |

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST
 DPE DBT Scheme/funds

3.9 For colleges Autono CPE DBT Star Scheme
 - INSPIRE CE Any other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences Organized by the institution

| Level | International | National | State | University | College |
|---------------------|---------------|----------|-------|------------|---------|
| Number | 2 | 1 | - | - | |
| Sponsoring agencies | college | DST | | | |

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations International National Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs: 12.8

From funding agency From Management of University/College
 Total

3.16 No. of patents received this Year

| Type of Patent | | Number |
|----------------|---------|--------|
| National | Applied | |
| | Granted | |
| International | Applied | |
| | Granted | |
| Commercialised | Applied | |
| | Granted | |

3.17 No. of research awards/ recognitions received by faculty and research fellows
Of the institute in the year

| Total | International | National | State | University | Dist | College |
|-------|---------------|----------|-------|------------|------|---------|
| - | - | - | - | - | - | - |

3.18 No. of faculty from the Institution
Who are Ph. D. Guides
and students registered under them

3.19 No. of Ph.D. awarded by faculty from the Institution

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF SRF Project Fellows Any other

3.21 No. of students Participated in NSS events:

University level State level
National level International level

3.22 No. of students participated in NCC events:

University level State level
National level International level

3.23 No. of Awards won in NSS:

University level State level
National level International level

3.24 No. of Awards won in NCC:

University level State level
National level International level

3.25 No. of Extension activities organized

University forum College forum
NCC NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Special camp Bhuvanachandra Town Hall, Narasaropeta mandal on 23-10-2016 for motivating the youth.
- Awareness to Villagers On Cashless Transactions.
- Awareness Program on Eye Check-Up
- Organizing Medical Check-up camps and Blood Donation Camps.
- Awareness Program On Digital Financial Literacy Campaign on 19-12-2016
- Third International Yoga Day was celebrated on 21st June, 2017 and Yoga.
- Voters day program to create awareness on power of vote among the young students.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

| Facilities | Existing | Newly created | Source of Fund | Total |
|---|-------------|---------------|----------------|-------------|
| Campus area | 12.04 Acres | - | - | 12.04 Acres |
| Class rooms | 63 | - | Self Financing | 63 |
| Laboratories | 64 | - | Self Financing | 64 |
| Seminar Halls | 7 | - | Self Financing | 7 |
| No. of important equipments purchased (\geq 1-0 lakh) during the current year. | | 13 | Self Financing | 13 |
| Value of the equipment purchased during the year (Rs. in Lakhs) | | 32.98 lakhs | Self Financing | 32.98 lakhs |
| Others | | | | |

4.2 Computerization of administration and library

- All the computers in the office have internet facility both wired and Wi-Fi.
- All library process is automated by using LIBSYS Software
- Procured an ERP – SeroSoft for implementation of E-Governance.
- All the accounts are computerized by using EZ software
- Digital Library for E-Journals
- Wi-Fi facility for the Library.

4.3 Library services:

| | Existing | | Newly added | | Total | |
|------------------|-------------------------------|---------|-------------|--------|-------|---------|
| | No. | Value | No. | Value | No. | Value |
| Text Books | 41112 | 8222400 | 1161 | 348300 | 42273 | 8570700 |
| Reference Books | 5776 | 1155200 | 666 | 171700 | 6442 | 1326900 |
| e-Books | 500 | 11500 | 100 | - | 600 | 11500 |
| Journals | 102 | 182100 | 12 | 22000 | 114 | 204100 |
| e-Journals | 250+ | 728676 | 28 | 188417 | 278 | 917093 |
| Digital Database | DELNET | 11500 | - | - | | 11500 |
| CD & Video | 1000 | - | 500 | | 1500 | - |
| Others (specify) | NPTEL 8TB audio Lessons | | | | | |

4.4 Technology up gradation (overall)

| | Total Computers | Computer Labs | Internet | Browsing Centres | Computer Centres | Office | Depart-ments | Other s |
|----------|-----------------|---------------------|----------|------------------|------------------|--------|--------------|--------------------------------------|
| Existing | 1054 | 22 | 64Mbps | 4 | 2 | Yes | All | - |
| Added | 60(i5) | 1(Civil Eng. Dept.) | - | - | - | - | - | 1(ser ves for Auto nomo us sectio n) |
| Total | 1114 | 23 | 64Mbps | 4 | 2 | Yes | All | 1 |

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- Internet access is provided to all faculty and students with 64 Mbps connectivity with Wi-Fi facility.
- Students are encouraged to use internet for their project work.
- We have EZ School Software and also procured serosoft ERP in the Institution for e-Governance of students, faculty and staff.

4.6 Amount spent on maintenance in lakhs:

| | |
|--|--------------------|
| i) ICT | 44,41,723 |
| ii) Campus Infrastructure and facilities | 48,35,239 |
| iii) Equipments | 1,10,4,555 |
| iv) Others | 3,73,15,842 |
| Total : | 4,76,97,359 |

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Awareness programs are conducted on Autonomous scheme and OBE.
- Training programs are conducted periodically to create the awareness and to enhance the entrepreneurial skills.
- Publishing college/Department Newsletter to encourage the new trends and events happened in the institute level.
- Incubation centre is established in the campus to promote startups.
- Training has been provided to convert the ideas into startups.
- Four startups were launched.
- Students have participated in AICTE Hackthon and presented their ideas.
- Personality development programs are arranged.
- IE and IETE student chapters are established.
- CRT Programs were conducted to enhance the skill develop in the students.

Canteen

- Clean Hygienic cafeteria is available for both students and faculty providing nutritious food for supporting day scholar students.
- A computer lab with internet facility is provided in girls hostel inside the campus.
- More number of bus services provided from different areas in addition to existing services.

Stationary Shop

Stationary Shop is available in campus. The basic requirements like stationeries, lab books are kept for sales in college premises.

Others

Repographic facilities are enhanced in addition to existing facility.

5.2 Efforts made by the institution for tracking the progression

- Day to day attendance in theory & lab classes and intimation to the parents
- In case of absent to the classes the same was informed to the parents by telephone/sms on the same day.
- Each Faculty member is appointed as a mentor for twenty students.
- The mentor maintains the complete record of the student.
- All the student counselors are involved in both academic and personal counseling for a group of 20 students.
- A separate counseling period was allocated.
- Suggestions and feedback are the index to understand the progression of students.
- Result analysis after each mid and semester examinations.
- Conducting carrier guidance programs.

5.3 (a) Total Number of students

| | | | |
|-----|-----|--------|--------|
| UG | PG | Ph. D. | Others |
| 700 | 115 | | |

(b) No. of students outside the state

(c) No. of international students

Men

| | |
|-----|-------|
| No | % |
| 592 | 72.63 |

Women

| | |
|-----|-------|
| No | % |
| 223 | 27.37 |

| Last Year | | | | | | This Year | | | | | |
|-----------|----|----|-----|-----------------------|-------|-----------|----|----|-----|-----------------------|-------|
| General | SC | ST | OBC | Physically Challenged | Total | General | SC | ST | OBC | Physically Challenged | Total |
| 591 | 61 | 8 | 361 | - | 1021 | 452 | 92 | 6 | 265 | - | 815 |

Demand ratio

Dropout %

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Personality development courses and student practice courses are part of the curriculum.
- In-house GATE coaching classes were conducting by internal and external subject experts.
- Eminent resource persons were invited to train in communication skills.
- Study material for competitive examinations is made available in library.

No. of students beneficiaries

462

5.5 No. of students qualified in these examinations

NET SET/SLET GATE CAT
 IAS/IPS etc State PSC UPSC Others

5.6 Details of student counselling and career guidance

- Student counseling and career guidance is done.
- Awareness programs on opportunities of higher education in India and abroad by In house team and by external professional agencies.
- Personality development programs are organized.
- Student counselling process has successfully resulted in improved student performance.
- Training and Placement Cell conducted CRT classes for better Employment of students.
- Students are motivated to participate in various competitions conducted by different Universities and colleges.
- Counselling by psychologist and psychiatrist on personal problems.
- Counselling is provided to the new comers for choosing a better branch during their admission.

5.7 Details of campus placement

| <i>On campus</i> | | | <i>Off Campus</i> |
|---------------------------------|---------------------------------|---------------------------|---------------------------|
| Number of Organizations Visited | Number of Students Participated | Number of Students Placed | Number of Students Placed |
| 24 | 683 | 414 | 108 |

5.8 Details of gender sensitization programmes

- Women empowerment and grievances cell was formed in the college
- International Women's day was conducted on 08-03-2017
- Student competitions on women empowerment were conducted.

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events Sports:

State/ University level National level International level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

| | Number of students | Amount |
|--|--------------------|-------------|
| Financial support from institution | | |
| Financial support from government | 2542 | 8,85,83,000 |
| Financial support from other sources | | |
| Number of students who received International/ National recognitions | | |

5.11 Student organised / initiatives Fairs:

State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed: _____NIL_____

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision of the Institute:

- To Groom Narasaraopeta Engineering College, the first Engineering college in Palnadu region of Andhra Pradesh, as a Technological Hub and Gateway of knowledge with Indian values and Universal standards.

Mission of the institute:

- To employ faculty and staff with performance of Excellence and Dedication.
- To develop advanced state-of-the-art Technological Laboratories with latest equipment and infrastructure.
- To establish huge and world class Library with International and National Journals and Books.
- To have Advanced R&D through interaction with highly reputed industries and academically premier institutes.
- To start more post graduate programs in thrust areas and finally go to the Deemed University status.

6.2 Does the Institution has a management Information System

Yes.

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

- Training the faculty to adopt the new OBE system for preparing curriculum under Autonomous scheme.
- Feed backs are obtained from all stake holders on existing JNTU Kakinada curriculum to take necessary steps to fill the gaps in the curriculum to be designed by the college under Autonomous scheme.
- Constituted BOS for all branches to design the curriculum.
- Necessary steps are taken to include the latest topics in the curriculum to suit to the needs of the industry as well as to develop the knowledge and skills of the students.

6.3.2 Teaching and Learning

- Encouraging practical assignments and project based learning by including mini projects from second year onwards.
- Industry internship/ industrial training is made mandatory to give practical exposure to the students.
- Increasing self-learning component
- Remedial classes for slow learners
- Involving fast learners in research activities
- Promoting the usage of ICT.
- Implementing OBE
- Introduced MOOCS
- Introduced online classes from scholars university USA and IIT Bombay.
- NPTEL Lectures were arranged to create wide exposure.
- Arranging training on pedagogy and assessing its impact on teaching-learning.
- Arranging Guest Lectures or Workshop to fill curriculum gaps and content beyond syllabus.
- Encouraging Faculty and students towards online certification course.

6.3.3 Examination and Evaluation

- Continuous internal evaluation
- Assignments are introduced and given weightage.
- Weightage given for both mid examinations
- Question papers are prepared by external faculty
- Valuation of answer scripts are done by external faculty
- Display of internal answer sheets to the students.
- Display of consolidated internal marks to the students in respective department notice board.
- Phase wise evaluation of project work.

6.3.4 Research and Development

- 86 journal publications in peer-reviewed journals.
- Incentives for publications
- Study leaves for research programmers,
- Digital library with E-Journals and internet facility
- Upgraded the labs by providing additional equipment and software.
- JNTUK approved research centres are established in CSE, ECE and ME.
- Encouraging faculty to register for Ph.D
- Two faculty members are awarded Ph.D
- 28 Faculty are pursuing Ph.D in different universities.
- Providing incentives to faculty for presentation of research papers, attending conferences, workshops, etc.
- Conducting various awareness programs by experts.

6.3.5 Library, ICT and physical infrastructure / instrumentation

Library

- Journals and digital databases are subscribed through IEL online, DELNET, INFLIBNET, ASME, ASCE.
- OPAC Software for library management
- NPTEL web courses and video courses are being used by staff and students to enhance their skills
- Digital Library with 30 systems was established

Infrastructure

- Established E- class rooms in all departments.
- Providing required computational facilities with sufficient number of computer and peripherals.
- Wi-Fi connectivity is provided in the campus
- Providing the various amenities such as canteen, indoor and outdoor game facilities, Gym centre, medical centre, hostels and transport.
- CCTV cameras have been installed within and around the campus for security purposes

6.3.6 Human Resource Management

- Decentralisation of Powers
- Faculty are being deputed for Management capacity enhancement programmes
- Faculty are encouraged to improve their qualifications.
- Faculty development programs are organised to enhance their knowledge and skills.
- Many of the faculty are involved in academic, administrative and social responsible Activities

6.3.7 Faculty and Staff recruitment

- To maintain the faculty as per the approved SFR Whenever there are vacancies notifications are given through newspapers and the recruitment is done by the Management through college staff selection committee as per the rules and regulations.
- Well qualified and experienced faculties are recruited as per the norms of AICTE.
- The appointment of faculty will be ratified by the university through a duly constituted selection committees.

6.3.8 Industry Interaction / Collaboration

- Experts from Industry are invited for interaction with faculty and students.
- Guest lectures are arranged from industries and academicians
- MOUs are signed with local industries for mutual benefit
- Students are encouraged to undergo internships
- Industrial visits are arranged.
- MOU with Hebeon Technologies for internship and training.
- MOU with Oracle for workforce development program
- MOU with Dyned (dual training and partner agreement) for certification of English language courses

6.3.9 Admission of Students

- 70% of the admissions are done by Govt. of Andhra Pradesh through web counseling.
- Vacancies if any will be filled through spot admissions.
- Remaining 30% of the seats are filled by the Management based on the guidelines given by Govt. of Andhra Pradesh

6.4 Welfare schemes for

| | |
|--------------|---|
| Teaching | <ul style="list-style-type: none"> • Free transport facilities for local faculty • Concession for Hostel & Transport facility for outstation faculty • Maternity Leave will be provided for female faculty • Laptops are provided for HOD's • Special CL for Research study • Group Insurance Scheme is provided to teaching staff |
| Non-teaching | <ul style="list-style-type: none"> • Free transport, Medical leaves etc., • Employee provident Fund (EPF) and ESI will be provided for Non-teaching staff • Maternity Leave will be provided for female Non-teaching staff |
| Students | <ul style="list-style-type: none"> • Concessional bus transport and scholarships • Offering financial support from college management for poor & deserving students • Gold medals and Cash prizes will be given to student for Academic toppers. • Sponsoring the students to participate in co-curricular and extracurricular activities. • Canteen facility with subsidized rates. |

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done Yes

No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

| Audit Type | External | | Internal | |
|----------------|----------|------------------------|----------|-----------|
| | Yes/No | Agency | Yes/No | Authority |
| Academic | Yes | A two member committee | Yes | IQAC |
| Administrative | Yes | A two member committee | Yes | IQAC |

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes

Yes

No

For PG Programmes

Yes

No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

- Indigenous software tool for Examination system
- Revaluation facility is provided
- Bar coding
- Paper setting and Valuation is done by External Faculty
- Encrypted question papers will be provided by the university which will be decrypted before one hour of the schedule time of the examinations.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

- Since UGC/JNTUK has accorded Autonomous status to the college, university has nominated experts as nominees in statutory bodies like governing body, CAC, BOS under Autonomous scheme status from the academic year 2016-17
- The nominees of the university on Board of studies helped to design the curriculum and provide the suggestions to improve the quality of education in the college
- Nominees of governing body and CAC have provided proper guidance for successful implementation of Autonomy.
- University representatives visiting the institution periodically
- Granted research centres to motivate and promote research activities
- Encouraging innovations in teaching, learning and research activities

6.11 Activities and support from the Alumni Association

- Alumni nominated as members in BOS of all the departments
- Participated in all the meetings and provided suggestions for designing the new curriculum under Autonomous scheme
- Active registered alumni association is present.
- Alumni interactions through website and when they visit the campus.
- Guest lectures are conducted by Alumni
- Extending technical help to students
- Alumni meets are conducted periodically to get feedback and to improve the number of placements

6.12 Activities and support from the Parent – Teacher Association

- Parents are invited to provide suggestion designing the curriculum under Autonomous scheme.
- Parent Teacher interactions at department level are conducted
- Feedback from parents is collected.
- Parent teacher meet is conducted every year with principal, staff and management members, where the discussion is open on any academic and administrative matters.
- Feedback is taken from parent and analyzed for further improvement
- Parents meet the respective counsellors and HOD's regularly

6.13 Development programmes for support staff

- Staff are deputed for domain related hands on training programmes
- ICT training and encouraging for Higher studies.
- Supporting staff are encouraged to go for training takes

6.14 Initiatives taken by the institution to make the campus eco-friendly

Energy Conservation

- Awareness among the students and staff on energy conservation is created by displays at appropriate places.
- Switching off all the electrical utilities whenever and wherever they are not required.
- All the departments are equipped with appliances and equipment that consume low power.
- The buildings are fitted with glass windows for maximum utilization of natural light.
- The college has widespread arrangements for power distribution with a Control panel and Power room.

Use of Renewable Energy

- Steps are being taken for the utilization of solar power in the college campus
- Solar plant has been installed in the campus with a capacity of 200 KW.
- Solar car prepared by students as a live project is being used for internal mobility with in the campus.
- Solar system is established for hot water facility at hostels.

Water Harvesting

- To minimize the wastage of water resources and to improve the water table, the rain water is led into the pond located in the campus.

Efforts for Carbon neutrality

- Care is taken to restrict vehicle entry into the campus and specific parking area is allotted for faculty and students.
Green campus

Plantation/Greening Drives

- Dedicated horticulturist to develop adequate greenery on the campus.
- 40% green covers on campus.
- Plantation programme has been taken up by the NSS unit for increasing the Green Cover in the college and nearby villages.
- The NSS unit regularly conducts awareness programmes on plastic free environment in and around the village.

Hazardous Waste Management and e-Waste Management

- The condemned batteries are disposed through outside agencies
- Awareness programmes are initiated on waste management.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

- Performance appraisal for faculty
- Financial Incentives for research publications
- Increased students participations in workshops and Conferences
- Involvement of students in various committees has been increased.
- Practice of conducting Guest lectures, Industrial visits and Industrial training has been enhanced.
- Value addition by certification programs as well as technology training is focused by various departments.
- More Practical orientation is supported through Mini-projects, Technical seminars.
- Industry Internship is encouraged for all students
- Continuous inputs from all stakeholders like Alumni, Academicians and Industry experts are taken to identify the curriculum gaps on regular basis and take necessary actions.
- Additional Training on communication skills and soft skills is further increased.
- Research aptitude among the students is inculcated through project implementations.
- Improved Membership in various professional bodies.
- Improved class room facilities with ICT tools.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the Beginning of the year

| Plain of Action | Action Taken |
|---|---|
| To obtain autonomous status from the year 2016-17 | Autonomous status is accorded by UGC/JNTUK from academic year 2016-17 |
| To design and develop a dynamic curriculum | After becoming Autonomous college designed and developed a dynamic curriculum by constituting BOS for different subjects/branches |
| To introduce innovative evaluation methods | Innovative evaluative methods are introduced under Autonomous scheme. |
| To obtain approval for research centres | Received approval from JNTUK for research centres in the departments of CSE, ECE and ME. |

| | |
|---|--|
| Nominating academic coordinators for each year at UG level to look after the progress of students and their class attendance along with the class teachers. | Academic coordinators at the level of Professors / Associate Professors were nominated for I, II, III & IV B.Tech in every department. Students attendance and progress record was closely monitored every fortnight by the Academic Coordinator. |
| Grouping the faculty members in to three or four based on specialization in each department. | In every department faculty members were grouped into three or four depending on their specialization. Each group was headed by a Senior Faculty. The course files, assignments, etc. prepared by the junior faculty members were verified and suitable guidance for improvement was provided by the Group leaders. |
| Allocating the Course coordinators for Courses of multi section program. | Course coordinators are allocated for courses of multi section program. |
| Organizing subject based seminars and subject based workshops. | Subject based seminars and subject based workshops are organized by the departments. |
| Involving students in various committees. | Involved students in various committees for better Improvement in the system. |
| Exposing students to various industrial processes. | Exposed students to various industrial processes through Guest lectures, Industrial visits and Internship. |

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

| |
|--|
| <p>Need based curriculum</p> <ul style="list-style-type: none"> • Courses beyond curriculum are offered to filled the curricular gaps for • Enhancing student skills by active learning tools <p>Mentoring program</p> <ul style="list-style-type: none"> • Mentoring program is effectively implemented to encourage student for regular interactions with the faculty to provide solutions for their academic and non-academic problems |
|--|

7.4 Contribution to environmental awareness / protection

- Observance of world population day programme was organized by NSS on 11-7-16
- Adult literacy drive was conducted at adopted village
- Observance of world human rights day is conducted on 10-12-16
- Rotary club conducted a rally on AIDS day during 1-12-16
- Environmental Awareness Programme are organised for students as well as faculty from time to time.
- Separate cell i.e. Ground & Gardening exists for protection of environment and keep the trees alive and green and to feed them with manure.
- E-waste is followed as per Govt. policy.
- Solar system is in place in the form of street lights etc.
- Dustbins have been kept at all prominent places to keep environment eco-friendly.
- Water harvesting system is in process.
- No vehicles are allowed to enter in academic area.

7.5 Whether environmental audit was conducted? Yes No

7.6 Any other relevant information the institution wishes to add. (For example SWOT Analysis)

Strengths:

- Well qualified faculty
- Autonomous college with existence of 19 years.
- Research centres to promote research activities.
- One of the most preferred, engineering colleges situated in a serene rural place of Palnadu region of Andhra Pradesh.
- Learned, pro-active and visionary management readily responding to the needs and aspirations of all stake holders towards quality education, placements and good governance.
- A highly decentralized administration, governed by a well-defined and transparent quality policy. Managed by different committees formulated satisfying the requirements of statutory bodies with Governing Body (GB) as the highest policy making body.
- College was accorded permanent affiliation by JNTUK, Kakinada in 2014
- 50% of the young faculty members have undergone pedagogical training programs on various subjects.
- National Board of Accreditation (NBA) accorded the status of Accreditation twice to the eligible UG B.Tech programs in 2009 and and 2013.
- Good financial discipline through appropriate budgeting and allocation.
- Aesthetically designed, spacious and fully computerized library.
- Feedback taken periodically from students, parents, alumni and other stake holders is given due weightage for taking corrective measures to strengthen the teaching learning process.
- Semester scheme with continuous assessment.
- Effective Teaching-learning process with use of ICT.
- Good ambience through infrastructure facilities.
- Ed-Vantage platinum partner of Microsoft and established an innovation centre
- MOUs with Industries.

Weaknesses:

- Lack of international exposure to compete at global level
- Lack of Industry- Institute interaction in a purposeful manner as college located in rural area.
- Inadequate research activities such as sponsored research projects

Opportunities:

- Introduction of new P.G programmes in thrust areas
- Enhanced Industry Institute interaction
- Library enhancement to access international knowledge resources.
- Inculcating the culture of entrepreneurship to rural youth through incubation centre.
- Enhanced support from Alumni in institutional development and placement opportunities.
- Situated very near to state capital of newly divided Andhra Pradesh by establishment of more industries.

Threats:

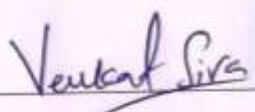
- Competition from other educational institutions
- Financial management because of fees reimbursement scheme under A.P state government
- Escalation of cost of education prohibiting the underprivileged section (rural students) of the society to opt for the technical education
- Merit of incoming students is getting affected due to opening of many new engineering colleges in the region.
- Bright students not opting teaching as profession thus making difficult in replacing the retired teacher with an equally intelligent new entrant, thus declining the supply of quality faculty

8. Plans of institution for next year

- Renewal of NBA accreditation
- TO finalize the syllabus and regulations for III an IV year of B.Tech courses
- Establishment of MOUs to promote research.
- Undertaking funded R&D major projects and consultancy works.
- Increasing the number of journal and conference publications.
- Strengthens alumni association.
- Planning to introduce mandatory courses, certificate courses, workshops, and short term courses.
- Enhancing the student's communication skills.
- Planning to increase the number participation in online certification courses such as NPTEL Etc.
- Preparation of AQAR
- Improving the security and discipline in the campus.
- Adapting innovative delivery methods
- Improving the faculty student ratio
- Organizing Campus Recruitment Training programs to Engineering students to enhance their employability skills

Name Dr. S. B. Venkata Siva

Name : Dr. M. Sreenivasa Kumar


Signature of the Coordinator, IQAC


Signature of the Chairperson, IQAC
PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601
Guntur (Dist.), A.P.