Internal Quality Assurance Cell (IQAC)

EXTERNAL ACADEMIC AND ADMINISTRATIVE AUDIT REPORT (ACADEMIC YEAR: 2018-19)

Date of Audit: 13-07-2019

Name and Designation of Audit Member-1: Prof. A. Sarath Babu, Dept. of Chemical Engineering

NIT Warangal, Warangal - 506 004.

Name and Designation of Audit Member-2: Prof. B.T. Krishna, Dept. of ECE, University College of Engineering, JNTU, Kakinada.

(The activities are to be graded on the following scale)

Excellent	Good	Satisfactory	Needs improvement
Α	В	С	D

Details of Programmes in the college:

S.No.	Name of the Programme	Sanctioned Strength	Actual Strength
UG		8	
1	Civil Engineering	120	103
2	Electrical and Electronics Engineering	120	107
3	Mechanical Engineering	240	208
4	Electronics and Communication Engineering	300	298
5	Computer Science and Engineering	180	178
6	Information Technology	60	52
n.C.	UG Total	1020	946
PG	PCP P. I. II. I.C.	10	
	ECE-Embedded Systems	18	09
2	ECE-VLSI - SD	18	04
3	EEE-Power Electricals and Electric Drives	18	12
4	Mech-CAD-CAM	18	13
5	Computer Science and Engineering	18	17
6	Computer Science	18	00
	PG Total	108	55
	UG and PG Total	1108	1001

1.Cur	ricular Aspects			
S.No.	Item	HEIs i/p	Grade	Remarks
1.1	Curricula developed /adopted have relevance to the local/national /regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all programs offered by the Institution	R-16 (I, II and III yr) Autonomous) R-13 (JNTUK)- IV Yr	A	Every three years curriculum is updated.
1.2	Percentage of new courses introduced of the total number of courses across all programs	ECE- I, II and III year (16/63) - 25.8% IV year (20/64)-31.25% EEE: 12.3% (8/65) Mech:9.37% (6/64) IT: 16.9% (12/17) CSE: 12.2%; Civil: Nil; BS&H: Nil	В	To strengthen the attainments of POs 6-12, appropriate inputs in the curriculum may be introduced.
1.3	Percentage of programs in which Choice Based Credit System (CBCS) / Elective course system has been implemented	CBCS has been introduced in all the programs	A	
1.4	Institution integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum	ECE: The institute is offering courses on Environmental studies (ES); Professional Ethics and Human values (PE&HV) EEE-ES, PE & HV; Mech; ES, PE & HV; CSE: ES, PE & HV; IT: ES, PE & HV; Civil- ES, PE & HV	A	
1.5	Number of Value-added courses imparting transferable and life skills offered	ECE: 4 courses (NPTEL-1,MOOCs-1, APSSDC-2) EEE:-2 Mech:7(NPTEL-1,APSSDC-6; Welding-1; CNC-1; CBT-1; R&AC-1 DASSAULT-1; Arc-1); IT: 2 (IOT & Python) CSE: 2 (NPTEL, MOOCs) Civil-2 (NPTEL, MOOCs) BS&H - NPTEL	A	Promoting certification programs.

1.6	aspects from stakeholders	The feedback on curriculum is collected regularly from the stakeholders (Students), Parents, Alumni and Employers		
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S.No.	Item	HEIs i/p	Gra de	Remarks
2.1	Demand Ratio (% of students	ECE: 92.5% (UG-99.33%; PG-36.1%) EEE: 86.2% (UG-89.1%; PG-66.66%) Mech: 85.6% (UG- 86.67%; PG-72.22%)	A	UG Admissions are very good.
	admitted)	CSE: 90.2% (UG-98.89%; PG-47.22%) Civil: 85.8% (UG-85.8%) IT: 86.6% (UG-86.6%)		
2.2	Number of full-time FCF: 54: Pr 3 Asso Pr 6 Asst Pr 45		В	Number of Faculty with Ph.D. and faculty cadre ratio is a concern.
2.3	Number of students enrolled	ECE: UG-298, LE-43 Total -341, PG-13 EEE: UG: 107; LE: 23, Total -157, PG: 12 Mech: UG-208; LE: 50 Total - 258, PG- 13 CSE: UG-178, LE: 15, Total - 193, PG-17 IT: 52; Civil: 103; LE: 27 Total: 130	A	
2.4	Student - Full time teacher ratio	ECE: 19:1; EEE: 17.8:1 Mech: 10.29:1; IT: 18:1 BS&H: 15.2:1; Civil:18.5:1 CSE: 15.7:1	A	
2.5	No. of permanent faculty with Ph.D ECE: 3; EEE: 3; Mech: 6 CSE: 6; IT: 1; BS&H: 5; Civil: 1		В	Less than 10% faculty are with PhD
2.6	Average teaching experience of full time teachers in years	ECE: 11.47; EEE: 6; Mech: 2.8 CSE:6; IT: 7.4; Civil:3, BS&H10	A	
2.7	Total No. of teaching days	180	A	
2.8	Preparation and adherence to Academic Calendar and Teaching plans	Academic calendar and teaching Plans are adhered without fail.	A	

2.9	Innovative processes adopted in Teaching and Learning	Power Point Presentation, Video lectures	A	
2.10	Teachers using ICT for effective teaching with Learning Management Systems (LMS), Elearning resources, MOODLES etc.	Faculty are using ICT facilities LMS is being used partially. (NPTEL-done by faculty)	A	
2.11	Remedial Classes for slow learners and backlog students	Remedial classes are conducted regularly for Students with less than 50% of Mid marks and with 3 backlog subjects.	A	Remedial Classes resulted in substantial improvement.
2.12	GATE Classes for Advanced Learners	GATE classes are conducted in ECE, Civil, Mech., IT and CSE departments	В	Results need improvement.
2.13	Mentoring System	Mentoring system has been adopted by means of counselling by faculty mentors. 20 to 24 students are allocated to each faculty and their progress is continuously monitored.	A	
2.14	Adequate facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.	Yes, Available	A	
2.15	Advanced Research Centres	Departments of ECE, ME and CSE are recognized as Research centres by JNTUK, Kakinada.	С	Advanced research facilities may be created in each department
2.16	Teachers attending professional development programs	ECE: 32, EEE: 55; CSE-33 Mech: F-15; FDP-11 IT: 23,	A	
2.17	Organisation of Guest Lectures, Industrial Visits, Workshops, etc.,	ECE: Guest Lectures-4 Industrial visits – 3 Workshops- 8; Seminar-4 EEE: GL-2; IV-6; WS-3; APSSDC: S-203, Seminar – 4 Mech: GL-11, IV-5, WS-1; APSSDC-359 CSE: GL-10, WS-12; IV-2; Seminar-10 IT: GL-6, IV-1, WS-13 Civil: GL-4, WS-2, IV-2	A	Page 4 of 18

		BS&H: GL-5; WS-1; IV-1			
2.18	Online Certification Programmes	ECE: Accredited with all India rank with 'AA' grade by NPTEL Faculty-44; Students- 328 EEE: Faculty-17; Students-105 NPTEL, IOT, EMC S-Electrical Vehicles, IOT, UHV Transmission, Digital Smart Grid, Design of PV systems Mech: NPTEL; F-15, S-225 IUCEE: F-244; S-167; Webnars-19 IT: NPTEL F-15; S-53; BS&H: F-29: S-135; CSE-Yes CSE: NPTEL S-145,F-15; Spoken Tutorial S-328.	A		
2.19	Student Professional Society Chapter and Association Activities	Civil: NPTEL F-22; S-132 ECE: IETE - 9; GL-3 Seminar-1; Workshop-5 EEE: ISTE-19; IE-6; Mech: ISTE-6; IE-1; Mechanical Engineers Association-3, CSE: CSI: 10, ISTE: 2, Pragsoft: 37; IT-CSI-10; ISTE-9, Civil: IEI-60;	A		
2.20	No. of Students undertaking field projects / internships	ECE: 283(internships) EEE: 55; Mech:116; CSE: 421 IT: -18 Civil: 6	A		
2.21	Dissemination of PEOs, POs, PSOs, COs	Disseminated at prominent places such as: Institute Website, Notice Boards, Department Offices, Library etc.	A		
2.22	Attainment of COs, POs, PSOs	Attainment of COs, POs, PSOs is done	В	Additional inputs may required improve attainment POs 6-12.	be to
2.23	Online student satisfaction survey	Teaching-Learning survey is taken three times in a semester along with Course end feedback	A		

3.Research and Innovation				
S.No.	Item	HEIs i/p	Grade	Remarks
3.1	The institution has a well-defined policy for promotion of research	Incentives are provided for publications, patent filing, Results, Professional Body	A	

		memberships, Attending		
		conferences and Faculty		
		retention.		
3.2	The institution provides seed money to its teachers	Not in practice	С	Research seed money may be introduced to motivate faculty to pursuresearch.
3.3	Teachers recognised as research guides	Mech: 1 (JNTUK) BS&H: 1 (JNTUK & AU)	В	Steps may be taken to recognize all professors as guides.
3.4	Sponsored research Projects and consultancy	BS&H: BRNS, BARC, Mumbai: One Major Research project-1 Completed Second Major Research project- Ongoing.	С	No Engineering Dept. has Sponsored research projects
3.5	Workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices	A mandatory audit course on IPR & Patents for all students is introduced.	A	
3.6	Research Publications	ECE: UGC Approved – 8; Scopus-5; Others: 20; EEE: UGC-12 Mech: UGC-2; Others-9, BS&H: UGC-7, IT: UGC-8; CSE: Scopus-1; UGC-41 Civil: Others-4	В	Quality & quantity of Research Publications need improvement.
3.7	No. of Faculty participated in conferences and symposia	ECE-6; EEE: Nil; CSE: Nil; Mech: 3; IT: Nil; BS&H 6	A	
3.8	Books and chapters in edited volumes / books published, and papers in national/international conference-proceedings.	Civil: Nil ECE:6(papers in national/international conference-proceedings) EEE: Nil; Mech: Conferences - 3 CSE: Papers- 42; Book-3; Book Chapters-2, IT-Papers-8; Book Chapter-1, Civil-Nil	В	Book Chapters and books limited to CSE Dept.
3.9	Revenue generated from Consultancy		С	Consultancy activity is absent.
3.10	Linkages with institutions/industries for internship, on-the-job training, project work, sharing of	ECE: 2 (Siemens lab-1, APSSDC-1) EEE, Siemens Lab); IT & CSE: APSSDC,	A	

	research facilities etc.	HYDSPIN, Deloitte; Mech: APSSDC		
		Civil-Nil, BS&H-Nil		
3.11	Functional MoUs	ECE: 6; EEE-4; IT-1 CSE & ITTCS, TCS ion, CYIENT, E&ICT, Mission R&D, Deloitte, Intensala, Mech : Sackrobotics, APSDC Lab, Civil-Nil, BS&H-Nil	В	MoUs with organizations related to the core areas to be strengthened.

4.Centr	al library Facility			
S.No.	Item	HEIs i/p	Grade	Remarks
4.1	Library is automated using Integrated Library Management System (ILMS)	Yes	A	
4.2	Collection of rare books, manuscripts, special reports or any other knowledge resource for library enrichment	Yes	В	Special resources may be identified and procured.
4.3	Does the institution have the following: e – journals, e-ShodhSindhu, Shodhganga membership, e-books, Databases	Yes N List Delnet, J- Gate	A	
4.4	Expenditure for purchase of books and journals	12,57,048/-	A	
4.5	Availability of digital library with a provision for remote access on intranet	Yes 25(Systems Available)	A	
4.6	Per day usage of library by teachers and students	250	A	
4.7	No. Of Titles, Volumes and Print Journals (As on 1.7.2019)	Titles: 10321	A	
		Volumes: 53261		
		Print Journals: 142		

5.Examination Section				
S.No.	Item	HEIs i/p	Grade	Remarks
5.1	Number of days from the date of last semester-end/ year- end examination till the declaration of results	4 weeks	A	

5.2	Percentage of student complaints/grievances about evaluation against total number appeared in the examinations	No Complaints 3.16% (Revaluation)	A	
5.3	Percentage of applications for revaluation leading to change in marks	0.85%	A	
5.5	Status of automation of Examination division along with approved Examination Manual	Yes 100% Automation	A	
5.6	Pass percentage of outgoing students	70.01%	Α	

6. Amenities and Sports facilities				
S.No.	Item	HEIs i/p	Grade	Remarks
6.1	The institution has adequate facilities for sports, games (indoor, outdoor, gymnasium, yoga centre etc.,) and cultural activities	Out Door: Kho- Kho; Kabadi, Volley Ball, Basket Ball, Cricket, Throw Ball, Tennicoit Gym & Yoga		
		Centre Present	A	
6.2	Awards/medals for outstanding	National-3	,	,
	performance in sports, Yoga /cultural activities at national/international level	State level-73	A	
6.3	Number of sports, Yoga and cultural activities / competitions organised at the institution level.	Sports-9, Games- 11 Yoga-yes	A	

7.Internet Connectivity					
S.No.	Iţem	HEIs i∕p	Grade	Remarks	
7.1	Institution frequently updates its IT facilities including Wi-Fi	Wi-Fi enabled campus	Ą	e e e e e e e e e e e e e e e e e e e	
7.2	Student - Computer ratio	Total number of computers for academic purpose: 1111	A		
		Student -			

		Computer ratio: 3.5:1		
7.3	Available bandwidth of internet connection in the Institution	330 Mbps	A	
7.4	Facilities for e-content development such as Media centre, recording facility, Lecture Capturing System (LCS)	Recording Facility is available.	A	

8.Plac	8.Placements and Higher Education				
S.No.	Item	HEIs i/p	Grade	Remarks	
8.1	Capability enhancement and development schemes	 CRT Program Mock interviews by industry experts Company Specific training 	A		
8.2	No of students benefited by guidance for competitive examinations and career counselling offered by the institution	Higher Studies: 49 Entrepreneur: 3	A		
8.3	Number of placements of outgoing students	716 Offers 592 students	В	Core placements and average salary package need substantial improvement.	
8.4	Students Qualified in Competitive Examinations	9 qualified in Gate	В	Need improvement.	

9.Alumni Engagement						
S.No.	Item	HEIs i/p	Grade	Remarks		
9.1	The Alumni Association / Chapters	PEC AA established in 2006.	A			
9.2	Alumni contributions	Guest Lectures Mock Interviews	В	Alumni may be involved in the development of the Institute.		

9.3	Alumni Association / Chapters meetings Conducted	Alumni meet is conducted once in a year	A	

emarks
ndatory audion Social Every studer tes in social bility activities

		5. The NSS Unit in association with G S L Dental College, RJY conducted a awareness programme on oral Cancer and Pre Cancer on 01-12-2018.180 students and 40 volunteers participated. 6. NSS unit of the college in association with NCC Unit of the college observed Communal Harmony Week:" from 18th Nov to 25th Nov, 2018. In the college. 25 Volunteers carried a fund raising programme and a total of Rs 7500/-was collected and sent to National Foundation for Communal Harmony, New Delhi. 7. The NSS Unit celebrated constitution day.88 students participated.		
10.3	Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development	1.The NSS Unit participated in NSS Swatch bharat internship in Surampalem village .100 volunteers attended the programme 2. The NSS Unit is Organized 7days NSS Special Camp Programme in Anuru Village from 4-1-2019 to 10-1-2019 involving 39 volunteers from II & III B. Tech & 20 I Year students. Awareness camps, sports games, survey were conducted.	A	Every student participates in social responsibility activities.
10.4	Awards and recognition received for extension activities	Best NSS Officer Award from JNTUK	A	

10.5	Extension and outreach programs conducted in collaboration Government Organisations, Non-Government Organisations	1.A Blood Donation camp was organized in the college campus in association with Red Cross Society, Kakinada on 12-04-2018. A total of 180 donors donated their blood.15 volunteers coordinated the activity. 2.A Blood Donation camp	A	
		was organized in the college campus in association with Rotary Blood Bank, Kakinada on 14-12-2018. A total of 102 donors donated their blood.20 volunteers coordinated the activity.		
		3. The NSS Unit in association with JNTUK, Kakinada organized a one day orientation programme PFMS and EAT Module to all NSS Pos of East & West Godavari District on 11-09-2018.10 volunteers coordinated the programme		
10.6	Number of students participating in extension activities	1063	A	
10.7	Village adaptation	Anuru	A	
10.8	NCC (Awards)	'B' Certificates awarded-28 'C' Certificates awarded-20 1Sgt.S.M.L.V.Preethi attended National AP EK Bharat Swachh Bharat-II, Guntur. CSUO N.Lakshman from IV ME attended the ADVANCED LEADERSHIP CAMP	A	

(ALC) at Madurai which was aimed to train cadets for SSB interview for 5 days.

	11.Administrative Procedures				
S.No.	Item	HEIs Input	Grade	Remarks	
11.1	Budget allocation, excluding salary for infrastructure augmentation	Rs. 18,11,96,000	A		
11.2	Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component	Rs. 17,73,66,788	A		
11.3	Established systems and procedures for maintaining and utilizing physical, academic and support facilities -laboratory, library, sports complex, computers, classrooms etc.	Standard procedures are being followed.	A	Good campus upkeep and maintenance.	
11.4	Students benefited by scholarships and freeships provided by the Government.	2573 students were benefited	A		
11.5	Students benefited by scholarships, freeships, etc. provided by the institution besides government schemes	839 students are benefited. Rs. 100.08 lakhs has been spent by the Management	A	Very good initiative from the management, benefitting a number of students.	
11.6	Support to differently abled students	Facilities like ramps at all important places is in place. Also, wheel chair is made available in the ground floor.	A		
11.7	Transparent mechanism for timely redressal of student grievances including sexual harassment and ragging	All statutory provisions are in place.	A		

	cases			
11.8	Presence of an active Student Council & representation of students on academic & administrative bodies/committees	Student representation in: IQAC, Antiragging, Transport and Hostel committees. Also, active Class representative and girl representative system is in place.	A	
11.9	Professional development / administrative training programs organized by the Institution for teaching and non-teaching staff	Faculty are encouraged to attend FDPs/Training programmes. Regn. Fee, travel are provided by the Management and Onduty permission is given.	A	

S.No.	Item	HEIs Input	Grade	Remarks
12.1	Governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution	Governing Body of the college meets twice in a year to discuss various issues and aspects related to the development of the college. Governing Body considers the recommendations of Academic Council, Finance Committee, Boards of Studies, etc and chalks out a roadmap to achieve the goals of the institution. After every meeting, minutes are recorded and circulated to all members, Also, the Action Taken Report is also prepared and shared with the members	A	Johnson of Roy
12.2	Decentralization and participative management	Proactive and participative management is in place.	A	
		Various academic and administrative activities in the		

		college are decentralized and assigned to faculty members, viz, Examinations, Career guidance Cell, R&D, Training & Placement Cell, Sports, etc.		
12.3	Perspective/Strategic plan and deployment documents	Selective agenda items of strategic plan are discussed in governing body meeting and decisions are circulated to all the departments.	A	
12.4	Organizational structure of the Institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism	All are in place.	A	
12.5	Implementation of e- governance in areas of operation	e-governance is in place in the following areas of operation: Administration Finance and Accounts Student Admission and Support Examination	A	
12.6	Effectiveness of various bodies/ cells/ committees is evident through minutes of meetings and implementation of their resolutions	Implemented effectively.	A	
12.7	Welfare measures for teaching and non- teaching staff	 Service awards to all staff who put in 10/15 years of service in college Group Insurance Free transport Paid Maternity and Medical leave PF & ESI facility Academic Leave 	A	
12.8	Performance Appraisal System for teaching and non-teaching staff	Both Self and Performance appraisal is done once in a semester.	A	
		Best performers are rewarded		

		by additional incentives.		
12.9	Institutional strategies for mobilisation of funds and the optimal utilisation of resources	All departments and units of the college ensure proper budget proposal, sanction and Utilisation.	A	
12.10	Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies	Cash incentives are paid for faculty publications in reputed National/International journals. On Duty is provided for faculty presenting papers in National/ International conferences	A	

13. IQAC				
S.No.	Item	HEIs Input	Grade	Remarks
13.1	Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes	Significant Contributions are made	A	
13.2	The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms	Yes, as per norms	A	
13.3	Quality initiatives by IQAC for promoting quality culture	Self Appraisals, Providing suggestions for improvements and Training Programmes for newly selected faculty	A	

Best Practices followed in the Institute:

- 1. Value addition by certification programs as well as technology training is focused through Skill Development Centre (APSSDC, IITB-RC, NPTEL, Spoken tutorial, Swayam Prabha).
- 2. The course coordinator system has been continued.

- 3. The practice of conducting Guest lectures, Industrial visits and Industrial training has been enhanced.
- 4. More Practical orientation is supported through Mini-projects, Technical seminars.
- 5. Program electives, Open electives and Mandatory courses as well as MOOCs are incorporated.
- 6. Continuous inputs from all stakeholders like Alumni, Academicians and Industry experts are taken to improve the curriculum on regular basis.
- 7. To ensure a good character with better ethical values among the students, professional ethics course has been introduced in the curriculum for all the students
- 8. Additional Training on communication skills and soft skills is further increased.
- 9. Research aptitude among the students is inculcated through project implementations.
- 10. An Advisory Committee has been formulated for every department with suitable external members.
- 11. A regular monitoring of Academic growth is taken care by the College Advisory Board (CAB)
- 12. Improved Membership in various professional bodies like IEEE, CSI, ISTE, IE, IETE, ISHRE
- 13. Institute has signed some MOUs and established Tie ups/collaborations with reputed organizations and institutions
- 14. Improved class room facilities with ICT tools.
- 15. Participation of students in Sports, Games at National and International level, NCC, NSS activities.
- 16. Employee friendly working environment with good retention
- 17. Incentives in terms of registration fee, travel and on-duty permission for attending conferences and workshops.
- 18. Fifty percent course fee is reimbursed by the management if they get AAA/AA rating in NPTEL courses.
- 19. Fifty percent membership fee is reimbursed by the management in professional bodies.
- 20. Free transport facility to faculty.
- 21. Incentives for Highest pass percentage.
- 22. Full financial assistance provided to faculty for attending training abroad.
- 23. Incentives for quality research publications.
- 24. Financial and promotional incentives for faculty obtaining PhD.
- 25. Merit Scholarships, Gold medals, Best project, Innovative project are supported by Maangement.
- 26. Free training to students at the skill based centres.
- 27. Ladies waiting hall and rest room in each department.
- 28. Revised Curriculum based on OBE is in place. CBCS is also implemented.
- 29. Active NPTEL Local Chapter.

Suggestions for improvement:

- Sponsored research and consultancy is very poor. Most of the Departments have been continuously applying for projects without much success. The Institute may take steps such as: conducting training/workshops on how to write good research proposals by inviting eminent researchers.
- 2. Research output by a way of publications in SCI / Scopus indexed journals needs a substantial improvement.

- 3. Urgent need to increase the number of faculty with PhD.
- 4. Consultancy activity is absent. A liaison Cell may be created with the objective of identifying problems faced by the nearby industry.
- 5. Special efforts are required to attract core companies for campus placement.
- 6. IQAC may be entrusted with the responsibility of preparing quality policy.
- 7. The PO attainment calculations need to be redesigned.
- 8. Alumni visibility is poor. Alumni contributions by way of offering Gold Medals, Internships and Placements may be explored.
- MOUs with higher level institutions with an objective of deputing faculty for carrying out PhD shall be encouraged.

A. S. Ball

Signature of AAA member 1

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