

INTERNAL QUALITY ASSURANCE CELL (IQAC)
V R SIDDHARTHA ENGINEERING COLLEGE

ACADEMIC AUDIT

Evaluation Sheet

(with effect from 2020-21)

Department Name : Electronics and Instrumentation Engineering

Programme Name : B.Tech.

Academic Year : 2023-24

Annual department plan (enclose a separate sheet along with the previous 3 years planned & achieved data)

I. POs, PSOs and Curriculum

S. No	Criteria	Observations
1.	POs & PSOs attainment along with sample calculation sheet	Data is available in PO and PSO attainment file.
2.	Stakeholders feedback collected, analyzed & action taken related to curriculum design (with evidences)	Student exit feedback collected and their suggestions were recorded and considered in VR 20 and VR 23 curriculum.
3.	Extent of stakeholders satisfaction with curriculum revision	The Stake holders suggestions were discussed in BOS meeting and considered in VR 20 and VR23 Curriculum revision.
4.	-New courses introduced -Courses upgraded with more than 25% of course content	No. of New courses introduced: 10 (VR 20) & 2 (VR23) VR -20: 34.15% courses revised. VR-23: 10 % courses revised. (up to 3 rd and 4 th Semesters)
5.	Lab component - New labs added - No. of new experiments introduced - New Hardware / Software developed	Rs.42,67,848 worth of new equipment/software/hardware procured for all the laboratories of EIE Dept. in 2023-24.
6.	No & percentage of courses focusing on employability/ entrepreneurship/ skill development.	VR-20: Skill-65%, Employability-30% & Entrepreneurship-5% VR17- Skill-66%, Employability-31% & Entrepreneurship-3%
7.	No of students undertaken -full time field projects: -full time internships:	128 students done internships (more than 3 weeks) for the academic year 2022-23.

II. Faculty information and their contribution

S. No	Criterion	Observations
1.	Teacher- student ratio	No. of faculty: 24, Total no. of students: 396
2.	Faculty Cadre ratio	Teacher student Ratio: 16
3	Faculty experience & retention	Professors: 01 Associate Professors: 03

		Assistant Professors: 20 90% of the faculty retained for last 3 academic years.
4.	Faculty qualifications: Percentage of existing faculty with PhD Faculty awarded with PhD: Faculty submitted their PhD: Faculty pursuing PhD: Faculty registered for PhD:	Total Ph.D. Faculty: 10 Faculty awarded with Ph.D.: 02 Faculty submitted their Ph.D.: Nil Faculty pursuing Ph.D.: 11 Faculty registered for Ph.D.: Nil
5.	Faculty with Post-Doctoral Fellowship or Pursuing it:	Nil
6	Faculty guiding /guided PhDs:	Faculty guiding Ph.Ds: 01 No. of research scholars: 05
7.	Percentage of faculty contributing inresearch publications:books:chapters:	Faculty contribution in research publications: 23/24 = 95.83% Faculty contribution in book publications: 01/24=4.16%
8.	e-Content development / Lectures added to Web-resources	All the faculty members are added lecture notes in LMS.
9.	Faculty contribution in professional organizations/ Reviewer / Editorial boards: <i>(not mere memberships)</i>	Reviewers: 1.Dr.P.Srinivas 2. Dr.S.Srinivasularaju 3. Dr.Md Firose Shaik 4. Dr.N.Swathi.
10.	Academic Awards/Rewards received:	Nil
11.	Faculty contribution in Industry / Institute collaborative projects	Nil
12.	Faculty trained in Industry	03
13	Faculty contribution in obtaining internships/ Placements/ MoUs	05 faculty members contributed to obtain internships for the students in industries.
14	Faculty as resource persons in webinars/ workshops / key note speaker / training activities	Nil
15	National level events organized -Conferences: -Workshops/ Seminars: - Webinars - FDPs: International level events organized - Conferences - Webinars -Workshops/Seminars	Workshops organized: 01 Guest Lectures organized: 02 Webinar organized: 01 Model /poster presentation: organized: 01
16	List of conferences/seminars/ webinars/ workshops/FDPs attended for the enrichment of teaching - learning process	No. of FDPs attended by faculty: 33 No. of workshops attended by faculty: 07 No. of seminars/webinars attended by faculty: 08 Training Programs attended by faculty: 11
17	Faculty interaction with outside world (BOS/NBA/Examiner for PhD evaluation / selection committee / Academic auditing / Chairperson /Chief	Dr. G.N.Swamy is a BOS member in Bapatla Engineering College & Andhra Loyola Collge of Engineering, Vijayawada.

	guest /etc.)	
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III. Teaching-Learning Process and Evaluation		
S. No	Criterion	Observations
1.	Student performance indices – Measures to reduce detentions -Attendance (detentions if any): -Exams (detentions if any):	Total no. of students detained on shortage of attendance is 03. Detention Percentage due to shortage of attendance is $03/128 = 2.34\%$
2.	Mechanism and activities for slow learners: Outcome:	Counselling Mechanism is done properly for the slow learners from Assignment –I examination onwards.
3	Mechanism and activities for Fast learners to excel: Outcome:	1. Fast learners are encouraged to opt CBCS subject. 2. NI academy training program is provided for fast learners.
4	Bridge courses: Value added courses:	Nil
5	Quality circles and Practice: Outcome:	Nil
6.	Student counseling /mentoring mechanism	Counselling is done as per the guidelines of HOD and Program Coordinator. Counselling Records are periodically verified by Program Coordinator and HOD.
7.	Initiatives taken for innovative mini and major projects -Training for students & faculty	The department of EIE has organized few Guest Lectures and Seminars in edge technologies for the students.
8.	Best student projects with awards	22 students got appreciation certificates for their best projects.
9	Student Model developments: Awards:	16 technical models were developed by the students.
10	Student Innovation details: Awards:	55 papers were published by the students in the A.Y:2023-24.
11	Student Publications (other than IV.1) -UG: -PG:	55

12	Monitoring of teaching-learning process -- Mechanism for Assessment of teaching process in classrooms. -- Random verification of evaluated answer papers and question paper during the semester. -- Innovative teaching methods presented, if any -- Verification of course files	Data is prepared by P.Srinivas, Program Coordinator, EIE Dept. Assessment: External results, Student feedback, COs and POs attainment and course end survey. Random Verification of Answer Scripts: Verified by HOD and Program Coordinator. Innovative teaching methods: PPTs with own annotations, Topics related to NPTEL videos and model usage. Verification of Course Files: Verified by HOD and Program Coordinator.
13	Student enrolment in CBCS	57 students were enrolled for CBCS courses for the academic year 2023-24.
14	EPICS (Engineering projects in community service) Projects: Awards:	No. of Project batches: 34 Awards: 03 best projects among all projects.
15	Activities of students in professional bodies: Awards in co-curricular activities:	Total no. of Events conducted under ISOI: 08 Total no. of students participated: 320 No. of students won prizes: 11
16	Training programs / Seminars/ workshops organized for students:	Workshops: 02 National Seminar: 01
17	Guest lecturers conducted for Students:	Guest Lectures: 02
18	MoUs with Industries for Research / Consultancy/ internship / placements, etc.	Existing: 03, Newly added: Nil .., Total: ...03....
19	Students feedback	Range of student feedback: above 4.0 Data is available in a separate file.
20	Feedback follow-up action	No Follow-up action is required.
21	Scope for Self-learning: -Certificate courses -Online courses	Some of the relevant NPTEL courses are approved for EIE students. Details are available in separate file.
22	Cut-off rank (Admission): Cut-off rank Previous year:..... OC: BC: SC: ST: PH: Audited year: OC: BC: SC: ST: PH: Improvement / no change / decline <i>Note: If there is <u>no improvement</u> it needs to be discussed & suitable measures are to be taken up.</i>	A.Y: 2022-23 OC: 22254, BC: 36033, SC:83055, ST: Nil, PH: Nil. A.Y: 2023-24 OC:70724, BC: 111362, SC:139451, ST: Nil, PH: Nil. The overall Performance of the department in 2023 admissions is slightly higher than the cutoff ranks in 2022-23 A.Y.
23	Range of CGPA & % of students 10 -8 CGPA: 7 CGPA: 6 CGPA: 5 CGPA: No. & % age of failures: Success rate as per NBA guidelines:	Consolidated results of 2019-23 batch: 9-10 CGPA: 01 8-9 CGPA: 29 7-8 CGPA: 51 6-7 CGPA: 36 5-6 CGPA: 6 4-5 CGPA: 04 0-4 CGPA: 01

		% of Pass: 128/128=100%
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IV. Research, Consultancy and Extension		
S. No	Criterion	Observations
1.	Faculty publications in journals: (other than III.11) Scopus indexed: SCI / SCIE (Not ESCI): Total: h-index: Dept & Highest in the faculty.	Journal Publications: 14 Scopus Indexed: 08 SCI/SCIE (Not ESCI): 06 Total: 14 h-index: 08
2.	Publications in conferences: - National (Scopus, SCI & equivalent) - International (Scopus, SCI equivalent) - Total:	Conference Publications: 34
3.	Faculty contribution in:books:book chapters: (Books/Chapters with ISBN/ISSN only are considered)	Book Chapters: 01
4.	Paper Publications & Book chapters:	Q1....06....., Q2.....03..., Q3....05....., Q4.....00..... Total.....14...
5.	Government: Funded R&D projects	Applied: 08 , Total Amount:Rs. 1,72,35,458 /- Ongoing:...Nil..... Total Amount:..... Completed:.....Nil..... Total Amount:.....
6.	Non- Government: Funded R&D projects / Industry sponsored projects	Applied:...Nil....., Total Amount:..... Ongoing:....., Total Amount: Completed:.....Nil..... Total Amount:.....
7.	Faculty involved in Consultancy & amount earned	Nil
8.	Faculty intellectual property rights / Patents:	Filed:...00.....Published...11....., Granted...01.....
9.	In-house R&D grants & projects and their outcomes	Nil
10.	New research facilities/ laboratory facilities added	Nil
11.	MOU's with industries/ R&D/ Premier Institutes Details of activities:	Nil
12.	Research centers of excellence established: Outcome in research centers:	Nil

13	Skill development centers established; outcome;	NI Academy and SIEMENS
14	Incubation centers; - Established with outside Industries; -Status of incubation;	Nil
15	Start-ups & Entrepreneurships; No of Start-ups & status; Awards from outside platforms;	Nil

V. Infrastructure and Learning Resources

S. No	Criterion	Observations
1.	Addition of infrastructural facilities to improve the teaching learning process Class rooms / Laboratories /ICT class rooms / e- class rooms/ Seminar halls / Syndicate rooms /Innovation center:	Class Rooms: 06 Laboratories: 06 ICT class rooms/e-class rooms: 01 Seminar halls: 01 Syndicate Rooms: Nil Faculty Rooms: 17
2.	Internet facilities for faculty & Students:	All the Faculty Rooms, Laboratories and Tutorial rooms are having internet facility.
3.	Technical manpower support added:	Total no. of technical staff: 05
4.	Modern / new equipment added in Laboratories:	Data is available in the corresponding lab stock registers.
5.	New research facility /Computing facilities / laboratory added:	One Software under procurement stage.
6.	Dept. News letter / magazine:	Yes, EIE Dept. is having News Letter with 2 issues per year.
7.	Department library: New additions Text books / References / Journals	No. of new books are added for 2022-23 A Y: Nil

VI. Student information, Support and Progression

S. No	Criterion	Observations
1	Industrial visits	Nil
2	Internships	128 Students are attended for internships.
3	Dept. student clubs: Activities:	Dept. Student Club: ISOL- Student Chapter Activities organized: 08
4	Details of coaching provided for GATE/GRE/any other competitive exams	Career counselling and soft skill development has given for the students.
6	Students qualified in -GATE -GRE/etc.	GRE: 07 TOEFL: 01 IELTS: 02 PGECET: 00 Dulingor: 04 GATE Appeared: 13 GATE Qualified: 00, Total no. of Students qualified: 14
7	Students admitted for Higher studies (No & %):	No. of Students admitted for higher studies: 07 No. of students appeared for competitive exams: 28

8	Total Placements (No & %) in the Dept: 2 - 4 Lakhs (No.): 4 Lakhs above (No.): 5 Lakhs above (No.): Highest salary (No.): Median salary:	Total Placements (No & %) in the Dept:63 students = 71/132=53.78% 2 - 3 Lakhs (No.): Nil 3-4 Lakhs (No.): 38 4-5 Lakhs above (No.):25 5 Lakhs above (No.): 8 Highest salary (No.): 8 LPA Median salary: 3.6 LPA
9	Student prizes:	NSS/NCC...Nil..Cultural.....Nil....., Sports.....Nil..... National Level, if any.....
10	Student Scholarships:	---

VII. Governance, Leadership and Management

S. No	Criterion	Observations
1	Setting of annual goals by individual faculty for their academic improvement.	HOD conducted several meetings and reviews regarding goals of individual faculty.
2	Setting of departmental annual goals by HOD for the improvement of dept.	Annual goals are fixed by the HOD based on the strategic plan 2020-25.
3	Teaching staff attended for skill development/ Industry training/ any professional development programs	The details are available in a separate file.
4	Non-teaching staff attended for skill development programs	Non-Teaching staff:04 The details are available in a separate file
5	Financial support received from the Management: Seed Grant for faculty: Incentive for Sponsored projects: Incentive for paper publications: Attending FDPs/ Seminars/ etc: Attending overseas seminars: Interaction with R & D personnel: Others:	No. of Faculty received Incentives for paper publications: 09
6	Financial support received from the Management: Student Projects: Model developments & exhibition: Student Innovations & exhibition:	Students are continuously encouraged for model exhibitions by the management. The details are available in a separate file.
7	Quality policy & Quality objectives Committees & duties: Cells & duties:	Prepared by Program Coordinator and HOD available in separate file.

8	Maintenance -General -Laboratory -Others	Each laboratory is having a separate maintenance register.
9	Financial support/ leaves for qualification/ skill up- gradation:	College is providing financial support for workshops/journals/conferences.
10.	Risk evaluation/ safety measures:	No. of Fire extinguishers: Labs:05, Dept. of Office: 01 & Seminar Hall: 01

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Dept. IQAC In-charge

..... 3/8/24
Academic Auditor (Int.)

..... B.K.N. Srinivas 03/08/24
Academic Auditor (Ext.)

..... G.N.S.
HOD, Dept. of EIE

HEAD
Dept of Electronics & Instrumentation Engg.
V R Siddhartha Engineering College
VIJAYAWADA-520 007

Ext. Auditor details:-

Dr. B.K.N. Srinivas,
Assistant Professor,
Dept. of ECE, NIT Warangal.

Int. Auditor details:-

Dr. Fayaz Ahamed SK.
Assistant Professor,
Dept. of ECE, VRSEC.

Academic Audit Report (Consolidated)

1. **Name of Department:** Electronics and Instrumentation Engineering **Year:** 2023-24
2. **No. of full time permanent faculty:** ...24....
2. **No. of Visiting/Adjunct faculty:** ...Nil... / ...01.....
3. **No. of PG / UG courses:** Nil.../...B.Tech with 2 Sections....
5. **Curriculum Revisions Information:** UG & PG.....UG (For VR-20 batch and VR-23)
Major changes.....VR-20(34.15%)andVR-23(10%)
.....
New courses...10 (VR-20) and 2(VR-23).....Modified courses (min 20-25% change)...34.15%
Employable courses...30%.....
6. **Research:** Ph.D. Theses submitted: ...Nil..... awarded: 02.....
Faculty guiding / guided Ph.Ds.:...05...../.....01.....
Publications in Jrs: SCI/SCIE...06Scopus...08.. Total: 14 (Including UGC)
Publications in Conferences: SCI/SCIE... Nil Scopus...34...WOS:Nil,
Total...34.....
Student Publications
-UG: SCI/SCIE:... Scopus:...34..... WoS:.....Others:.....Total...34.....
-PG: SCI/SCIE:Scopus:.....WoS:.....Others:.....Total.....
Dept H-index (Scopus data base):.....Highest H-Index of faculty:.....
Publications: Q1...06....., Q2...03..., Q3...05....., Q4...Nil.....Total...14.....
7. **Sponsored projects:** Amount:Rs. 1,72,35,438...Applied...08.....Ongoing....., completed.....Nil...
8. **Consultancy Amount earned:.....Nil.....**
9. **Start-ups & Entrepreneurship:** Nil.....Awards from outside platforms:...Nil.....
10. **Incubation centers:** established.....Nil....., Status of incubation:.....Nil.....
11. **Patents:**
Filled:.....00.....Published:...11.....Granted:.....01.....
12. **Innovations:** ...Nil..., Awards from outside platforms (reputed Institutions only) :.....
13. **Books / Book chapters** (with ISBN/ISSN only are considered):.....01.....
14. **e-Content developed:** Lectures added to Web-resources:Nil.
15. **Placements:** No:...72..., Percentage:...60%..., Median salary:...3.5LPA..., Highest salary:...8 LPA.....
16. **Higher Education:** GATE No...Nil., GRE No...07....TOEFL:01, IELTS:02, PGECET:00
Dulingo:04.
17. **New Equipment and Infrastructure** added: ...Rs.42,67,848.....(Name & amount)
18. **Student feedback** on Curriculum, infrastructure and facilities: Yes
19. **Strengths:**
(1) Good infrastructure and core job opportunities.
(2) Good Laboratory facilities.
(3) Faculty qualification and retention.

Weaknesses (mandatory field to fill):

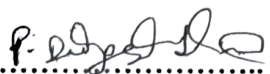
- (1) Student quality in terms of starting and ending ranks.
- (2) R&D, and Consultancy activities.

Suggestions for improvement (mandatory field to fill):

- (1) Remedial classes need to conduct for slow learners.
- (2) Industrial visits for filed exposers.
- (3) FDPs organization need to increase.

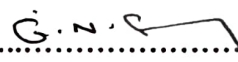
18. Document addressing previous academic year weaknesses and suggestions for improvement.

Enclosed: **Yes / No**. If 'yes' enclose an appropriate document. If "No" furnish proper explanation.


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Dept. IQAC In-charge

 03.08.24
.....
Academic Auditor (Int.)

B. K. N. Srinivas
03/08/24
.....
Academic Auditor (Ext.)


.....
HOD, Dept. of EIE
HEAD
Dept. of Electronics & Instrumentation Engg
V R Siddhartha Engineering College
VIJAYAWADA-520 007

Details of Ext. Auditor:-

Dr. B. K. N. Srinivas Rao.
Assistant Professor,
Dept. of ECE, NIT Warangal.

Details of Int. Auditor:-

Dr. Fazez Ahmed SK.
Assistant Professor,
Dept. of ECE, VRSEC.

V.R. Siddhartha Engineering College
Department of Electronics and Instrumentation Engineering

MINUTES OF THE MEETING OF ACADEMIC AUDIT 2023-24 A.Y

**Minutes of the Meeting of IQAC Academic Audit held on Saturday, 3rd August, 2024
at 10.00am.**

The Meeting of the IQAC Auditing Committee of Dept. of EIE, V.R.Siddhartha Engineering College was held on Saturday, 2nd August 2024 at 10:00 pm in EIE Department.

The following Members were present.

1. Dr.B.K.N.Srinivasarao – Assistant Professor, ECE Dept., NIT Warangal.
2. Dr.Sk. Fayaz Ahamed – Assistant Professor, ECE Dept., VRSEC.
3. Dr.G.N.Swamy, HOD, EIE Dept., VRSEC.
4. Dr. P.Durgaprasadarao , IQAC Dept. Coordinator, EIE Dept., VRSEC.
5. Dr.M.Srinivas, Assistant Professor, EIE Dept., VRSEC.

All the members were present for the meeting. The following comments/suggestions made by the external auditor.

- Remedial classes need to conduct for slow learners.
- Industrial visits for filed exposers.
- FDPs organization need to increase.
- R&D, and Consultancy activities need to increase.
- Provide Computers in Dept. library for accessing e-journals.
- Motivation required in extracurricular activities (like Sports, etc.)
- Subject enrichment classes required.

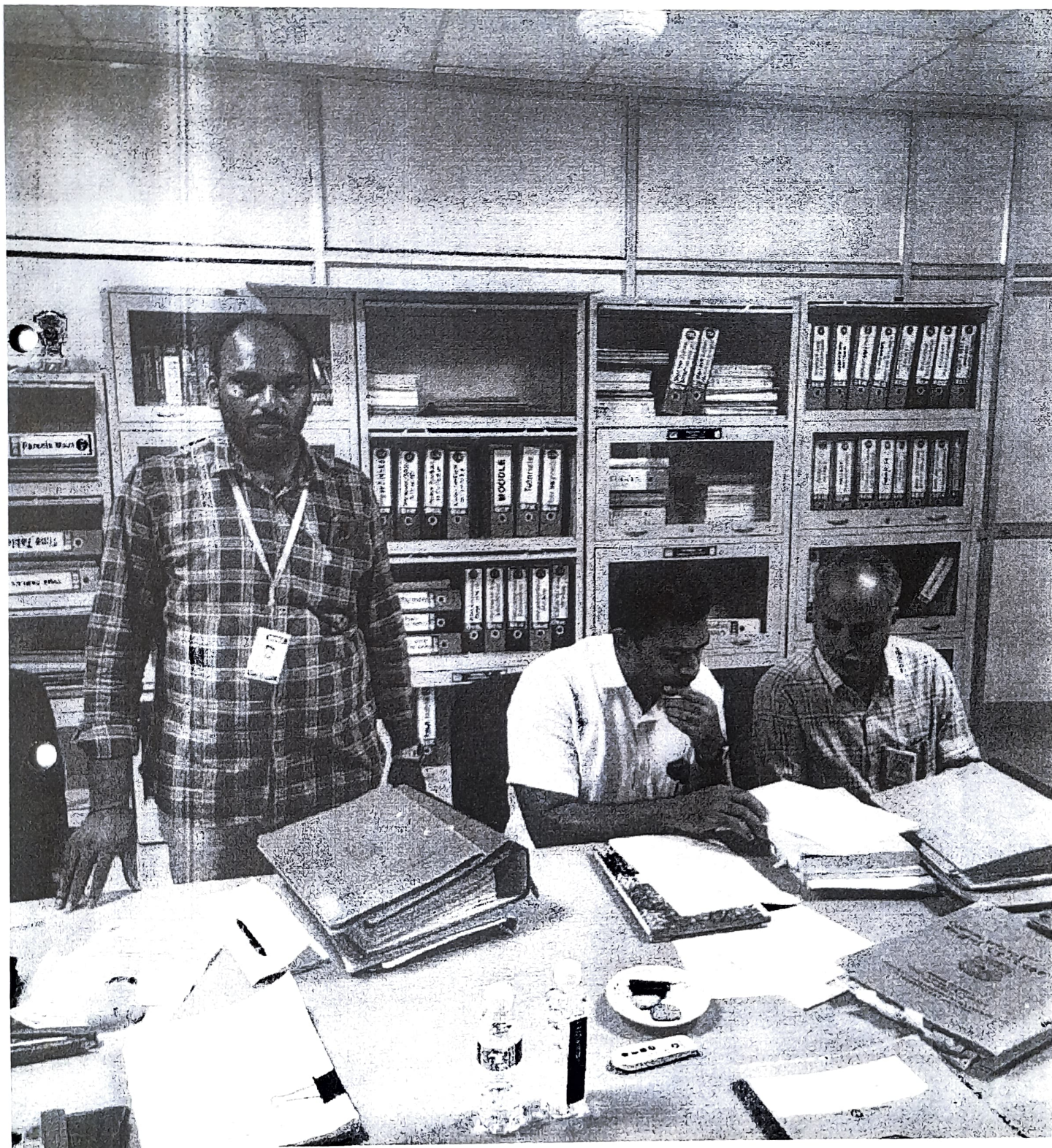
B.K.N. Srinivas 03/08/24
(EXT. AUDITOR): **Dr.B.K.N.Srinivasa Rao**
Assistant Professor, Dept. of ECE
NIT, Warangal.

Fayaz 03.08.24
(INT. AUDITOR): **Dr.Shaik Fayaz Ahamed,**
Asst. Prof., ECE Dept., VRSEC.

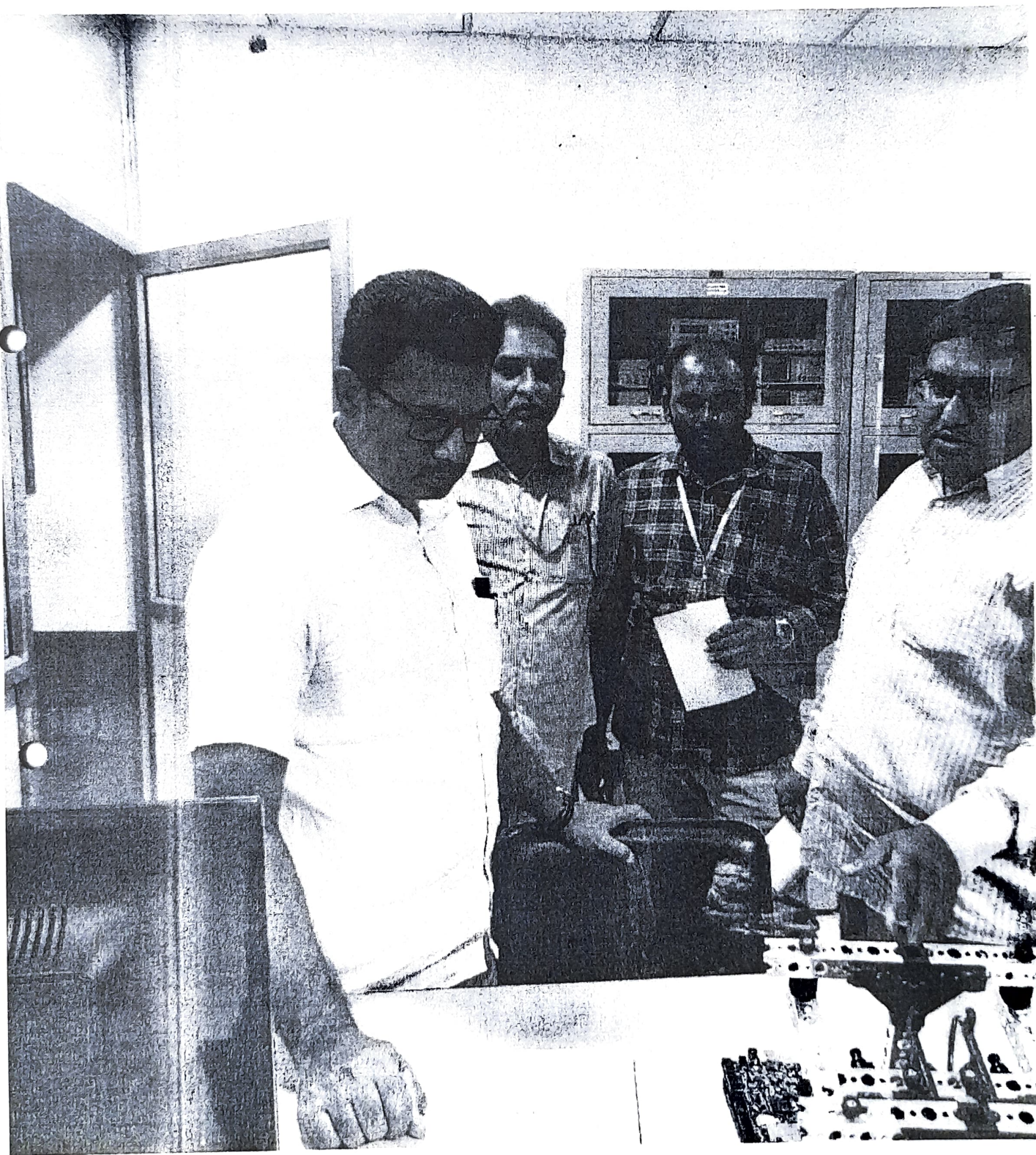
G.N.Swamy
Dr.G.N.Swamy
HOD, EIE

P. Durgaprasada Rao 03/08/2024
(Dr. P. DURGAPRASADA RAO)
Dept. IQAC Co-ordinator.

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Dept. of Electronics & Instrumentation Engg.
V R Siddhartha Engineering College
VIJAYAWADA-520 002



CNS
HEAD
Dept of Electronics & Instrumentation Engg
V R Siddhartha Engineering College
VIJAYAWADA-520 002

V.R. Siddhartha Engineering College
Dept. of Electronics and Instrumentation Engineering

A.Y: 2022-23

Date of Academic Audit for the Academic Year 2022-23: 14.08.2023

Comments made by the External Academic Auditor:

1. R&D projects by the faculty need to be improved.
2. Faculty need more concentration on Patents and Consultancy activities.
3. Alumni interaction for sharing their experiences on carrier growth.
4. More no. of more number of students need to be sent for paper presentation to the premier institutions.
5. Python based and Matlab based system on chip boards needs to be introduced in the curriculum.

Mechanism for implementation:

1. The department had a review mechanism by HOD with the all doctorate faculty to get R&D projects,
2. The Department of EIE arrange meetings frequently by HOD with all the faculty to get more no. of patents and consultancy activities.
3. The alumni coordinator will monitor interaction between prominent alumni and students for better carrier growth.
4. Student activities coordinator will monitor every two months regarding student participation in the outside world.
5. The Department of EIE arrange meetings frequently by HOD with all the faculty to get new equipment/software related to edge technologies

Follow-up action taken by the Department:


1. The HOD of EIE department circulated the various project calls to the faculty to meet the strategic goals of the department.
2. In every meeting, HOD of EIE department concentrating on Patents and consultancy activities.
3. In Dept. Meetings, HOD and Program Coordinator review the alumni student activities. HOD instructed that more concentration required in alumni WhatsApp group communication.
4. In Dept. Meetings, monitored the status of student participation in outside world. Budget allocated for paper presentations at premier institutions is Rs.20,000 in 2023-24 budget.
5. The HOD of EIE department continuously monitoring the need of new equipment/software to achieve student employability by taking suggestions from stake holders feedback.

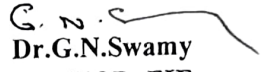
Outcomes:

1. 06 faculty members are actively involved in R&D projects. The total amount for the applied projects is Rs. 1,72,35,438 /- in the academic year 2023-24.
2. Published patents increased to 11(2023-24 A.Y) from 05 (2022-23 A.Y) and also 01 granted patent in 2023-24 A.Y.
3. One Alumni from Quest Global Ltd., Hyderabad appointed as an Adjunct faculty to enhance the student employability skills in Industrial Internet of things and One Alumni from BHEL appointed as a BOS member to strengthen the curriculum for best carrier

growth in industry. Student placements in core industries increased to 69.23% (2023-24 A.Y) from 39.13% (2022-23 A.Y).

4. 23 students participated in technical paper/poster and model competitions in various reputed institutions and 04 students participated in Hackthon-2024 in AMTZ MedTech Zone, Visakhapatnam.
5. In VR-23 regulations, proposed "Digital System Design with FPGA" subject in Third year Second Semester to meet the SOC (System On Chip) concepts. Syllabus was not finalized yet for VR-23, 3rd year 2nd Semester.


Dr.P.Durgaprasadarao
IQAC Dept. Co-ordinator.


Dr.G.N.Swamy
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