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

ACADEMIC AUDIT
Evaluation Sheet

Department Name : ELECTRICAL & ELECTRONICS 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	PO attainment for 2020-24 batch is available (VR20 Regulation).
2.	Stakeholders feedback collected; analyzed & action taken related to curriculum design (with evidences)	• Feedback collected from Stakeholders. (Faculty, Students, Parents & Alumni). • Stakeholders suggestions of A.Y.2022-23 were analyzed and actin taken related to curriculum action was implemented in A.Y. 2023-24.
3.	Extent of stakeholders satisfaction with curriculum revision	• Curriculum will be revised by considering the inputs from stake holders (Faculty, student, Parents& Alumni). • The inputs are reviewed and forwarded to concern course coordinators through module coordinators. • Suggestions &recommendations given by DAB & BOS members are considered implemented for Curriculum revision.
4.	-New courses introduced -Courses upgraded with more than 25% of course, content	**New courses introduced** • Program Elective- 4: Digital Design with FPGA (20EE7403C) • Embedded Systems(20EE7403B) • Skill Advanced Course: IOT Fundamental: Connecting Things (CISCO Certification) (20EE7607) **Courses upgraded with more than 25% of course, content:** • Power System Analysis (20EE6301) • Power System Protection(20EE6302) • Power System Operation & Control (20EE7301).
5.	Lab component - New labs added -No. of new experiments introduced -New Hardware/Software developed	**New labs added**: EV Lab . **No. of new experiments introduced:** 1.Power Electronics Lab (20EE5351): 04. i. Implementation of single phase full bridge inverter using FPGA. ii. Implementation of three phase full bridge inverter using FPGA.

		iii. Implementation of buck converter using FPGA. iv. Implementation of boost converter using FPGA. 2.Power Systems Lab**(**20EE6351): i.Active and Reactive power control of single machine connected infinite bus. ii.3-Zone protection of transmission line using iii.Numerical distance relay iv.Differential protection of Transformer using numerical relay
6.	No & % of courses focusing on employability/ entrepreneurship/ skill development.	a.Employability:26 % of courses focusing on employability :26/53=49.05% b. Entrepreneurship: 3 % of courses focusing on entrepreneurship:3/53=5.66% c.Skill development: 10 % of courses focusing on / skill development:.10/53=18.86%
7.	No of students undertaken -full time field projects: -full time internships:	Full time field projects: Nil III year Students: Full time internships: 131 students (6 Weeks) (without Stipend) Full time internships: 06 students (6 Weeks) (with Stipend) IV year Students: Full time internships:132 students (16 weeks) With Stipend:39 Without Stipend:93 Internships through placements (with Stipend):07

II. Faculty information and their contribution		
S. No	**Criterion**	Observations
1.	Teacher-student ratio	a.1:17.79 (Excluding first year faculty) as per NBA Guidelines. b.1:18.79 ((inclusive of UG and PG faculty and Students)
2.	Faculty Cadre ratio	2:3:21
3	Faculty experience & retention	Average Experience:15 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:	Percentage of existing faculty with PhD :46.15% (12/26) Faculty awarded with PhD:01(Sri.T.Naveen) Faculty submitted their PhD: S.N.V.S.K.Chaitanya Faculty pursuing PhD:10 Faculty registered for PhD: 01(V.Ravindranath Chowdary)
5.	Faculty with Post-Doctoral Fellowship or Pursuing it:	NIL

6	Faculty guiding/guided PhDs:	Faculty guiding PhDs:04 1.Dr.A.Rama Devi(JNTUK) 2.Dr.G.Srinivasa Rao(JNTUK, Annamalai University) 3.Dr.B.Venkateswara Rao(Annamalai University, JNTUK) 4.Dr.Subhojit Dawn(NIT Meghalaya,MAKAUT)
7.	Percentage of faculty contributing in … ……..research publications: ……..books: ……..chapters:	Research publications:18/26=69.23% Books:0 Chapters:6/26=23.07%
8.	e-Content development / Lectures added to Web-resources	Lecture notes, ppts, Question banks, Tutorial sheets uploaded unit wise in LMS/WhatsApp groups/Group mails.
9.	Faculty ***contribution*** in professional organizations/ Reviewer /Editorial boards: *(not mere memberships)*	Refer Annexure-I, Refer Annexure-III
10.	Academic Awards/Rewards received:	1.Dr. Subhojit Dawn-Best Associate Editor Award -Journal of Electrical Engineering & Technology, Springer, December 2023.
11.	Faculty contribution in Industry/ Institute collaborative projects	a.Dr.T.Naveen Kumar involved in training students on Robotics domain with the technical and financial support from " Peepuls Agri Ventures LLP, Hyderabad". b.Dr.J.Vimala Kumari involved in training students on Drones domain with the technical support from by "Fopple Drone Tech Pvt.Ltd, Kankipadu". c.Dr.K.Dhanajay involved in training students on Electric vehicle domain with the technical support from "Sytiqhub,Surampalli, Vijayawada".
12.	Faculty trained in Industry	1.P.Venkatesh and S.N.V.S.K.Chaitanya trained-HiTech Automation Limited ,Tadigadapa,Vijayawada. 2.Dr.P.V.R.L.Narasimhan,Dr.J.Vimala Kumari,Dr.K.Dhanajay Rao and Dr.D.Indira-Kcombinator,USA
13	Faculty contribution in obtaining internships/ Placements / MoUs	Internships: Refer Annexure-VII No.of Placements:09 1.Dr. Dr. P. V. R. L. NARASIMHAM:06 (CONNEQT, RANDSTAD, Sai Constructions, OI TECH SOLUTIONS) 2.Dr.K.Dhananjay Rao:03(Sri Vidhyut Eco Tech India Pvt Ltd) MOUs:02,Skill Dezire(Sri.T. SUNEEL),Peepul Agri Ventures LLP(Dr. P. V. R. L. NARASIMHAM)
14	Faculty as resource persons in webinars/ workshops/ key note speaker /training activities	Refer Annexure-II

15	National level events organized -Conferences: -Workshops/Seminars: - Webinars -FDPs: International level events organized -Conferences - Webinars -Workshops/Seminars	 Conferences: NIL Workshops/Seminars:06 Webinars: NIL FDPs: 01 Conferences: NIL Webinars: NIL Workshops/Seminars: NIL
16	List of conferences/seminars/webinars/ workshops/FDPs attended for the enrichment of teaching – learning process	Conferences:09 Seminars/Webinars:05 Workshops:07 FDPs/STTP:40 Coursera: 09 NPTEL:15
17	Faculty interaction with outside world (BOS/NBA/Examiner for PhD evaluation / selection committee /Academic auditing/ Chairperson /Chief guest/etc.)	Refer Annexure-II

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):	Measures to reduce detentions: 1. Senior faculty will interact with students 2. Parents meet conducted 3. Counseling by faculty. Detention :

Semester	No.of students	Reason
3	01	Attendance
4	01	Attendance
5	Nil	----
6	01	Attendance
7	Nil	----
8	Nil	----

2.	Mechanism and activities for slow learners: Outcome:	1.Remedial classes are conducted for the students who got less than 50% marks in internal assessment of (A-I& II and S-I). 2.Quality circles are implemented, where groups are formed with slow learners in which each group is assigned to a merit student in that course from the same class. **Outcome:** The performance of few slow learners has been improved in continuous assessments and end semester examination.
3	Mechanism and activities for Fast learners to excel: Outcome:	1.CBCS is implemented for fast learners so that they can concentrate more on their project work or can do their project at industry.

		2.Guest lectures on advanced topics were conducted on recent trends so that the fast learners can work in that domains. 3.Fast learners were encouraged to publish their project work in reputed journals and conferences. 4.Allowed to attend full time internships. 5.Honor and Minor degree courses have been introduced for fast learners so that they get more opportunities in different areas. **Outcome:** 1. UG students have made **31** publications. 2. Few students were placed in core industry based on the skills acquired by them during the training programs. No of students placed in Core Companies : **54**
4	Bridge courses: Value added courses:	**Bridge courses:** • Conducted Bridge course for lateral entry students in Mathematics Course (20BS3101) and Network Analysis-II course (20ES3104). **Value added courses:** • Conducted Value added course for III semester students on fundamentals of MATLAB Programming and Simulink. • Conducted Value added course for IV semester students on MATLAB Programming and Simulink by covering Electrical Networks, Electrical Machines, Control Systems and Electronic circuits..
5	Quality circles and Practice: Outcome:	Quality circles are conducted for the course EM-II in A.Y 2023-24. **Outcome:** The performance of some of the slow learner has been improved in continuous assessments and end semester examination.
6.	Student counseling/mentoring Mechanism	1. Maintaining Proctor Dairy. 2. For every 18 number of students one counselor is allotted. 3. For every 15 days regularity of students are monitored by counselors and class teachers. Parents are informed about their wards who are having less than 75% attendance and less than 50% of marks in internal assessment. **In A.Y. 2023-24** 1. Whatsapp groups were created by counselors for their respective allotted students and communicating the necessary information whenever required. 2. Attendance of every class is posted in the whatsapp groups and monitored by the respective counselors. 3. Student group mail is created for circulating the information and placing e-content.
7.	Initiatives taken for innovative mini and major projects -Training for students& faculty	• Encouraging the students to participate training programs in reputed colleges. • Conducted workshops and guest lectures from industry experts on latest technologies. • Students are explored to real time problems.

		• Students are motivated to publish their projects in reputed Journals and Conferences.
8.	Best student projects with awards	**Best student Projects:** **The criteria for selecting best project includes:** • Innovation in the project • Latest technology implemented in the project • Whether addressing societal/environmental issues • Extent of implementation • Publications from the project work The evaluation for the above mentioned points will be done as per the rubrics developed Below. Reviewers are requested to give the grading in terms of A, B, C and D. A= Excellent B=Good C= Average D=Below Average 1. Design and development of an affordable lightweight smart electric two-wheeler for sustainable urban mobility.(K.Mohan Murali Krishna Reddy,B.Avinash)-Electric Vehicle 2. Automated multipurpose rock-bottom compact machinery for smart agriculture.(D.Guru Charan,V.Swapna,D.Aruna Sagar,A.Syam Sagar)-Electric Vehicle 3.Energy Efficient Seminar Hall Automation Using Image Processing.(K.Devisri Bhanu Prasad,Sk.Imram,J.Nikhil Kumar,B.Prasanthi)-IOT
9.	Student Model developments: Awards:	**Student Model developments:** Various working models are developed through mini-Project-1,2 and major project. Awards: 01(Through EPICS and Mini Project-1) (B.Rakesh,N.Sai Kiran,A.Naveen-won first prize and received a prize amount of Rs 9000/- at the INFINITUS 2024 National-Level Techno-Cultural Fest which was held on March 21–21, 2024, and was organized by SRM University–AP.)
10.	Student Innovation details: Awards:	Innovation day on 15-10-2023. Awards: First and Third prizes secured by IV/IV B.Tech students. (D. Gurucharan, Jalli Sreelekha) Fourth prize secured by II/IV B.Tech students. (Innovative Model)(K.Teja Sri)
11.	Student Publications (other than IV.1) -UG: -PG:	UG students:31 PG students:03
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	1. Assessment of teaching process in classrooms is monitored by Head of the Department through feedback and interaction. 2. Random verification of approximately 10-20 answer scripts have been evaluated for 5 courses during the semester. The internal assessment question papers during the semester are verified.

	presented, if any --Verification of course files	Blooms taxonomy as well as cognitive levels are verified. 3. The innovative teaching methods. • Lab taken to class (LTC) • Quality circles 4. All the course files have been verified by both Program coordinator and H.O.D.
13.	Student enrolment in CBCS	1.SOLAR PHOTOVOLTAICS (20EE5404B) -50 Students .
14.	EPICS Projects: Awards:	Projects:35 Awards: NIL
15.	Activities of students in professional bodies: Awards in co-curricular activities:	Total no:13 Refer Annexure-III • 38 students participated in various events like quiz, master class, workshops etc. conducted by premier institutions. Awards: 01(B.Rakesh,N.Sai Kiran,A.Naveen-won first prize and received a prize amount of Rs 9000/- at the INFINITUS 2024 National-Level Techno-Cultural Fest which was held on March 21–21, 2024, and was organized by SRM University–AP.)
16.	Training programs/Seminars/workshops organized for students:	Total no:13 Refer Annexure III
17.	Guest lectures conducted for Students:	Total no:06 Refer Annexure III
18.	MoUs with Industries for Research / Consultancy/ internship / placements, etc.	Department: Existing: 08, Newly added: 02, Total:10 Central Level:02(1.NIT, Warangal 2. GMRIT, Rajam)
19.	Students feedback	• The feedback collected twice in every semester at the beginning of Semester and at the end of semester from students on faculty teaching performance • Course end survey collected at the end of semester for each course. • Student exit survey collected every year from the students of outgoing batch on the entire program.
20.	Feedback follow-up action	Yes. Appreciation letters will be given faculty whose feedback score is more than 4.8 on a scale of 5 and advisory letters are given to the faculty whose feedback score is less than 3.5.
21.	Scope for Self-learning: -Certificate courses- Online courses	Self-learning platforms are NPTEL and Coursera and edx. 265 Students completed using self-learning platforms.
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 ***Note: If there is <u>no improvement</u> it needs to discussed & suitable measures are to be taken up.***	There is a improvement in cut off Rank for the academic Year 2023 -2024, compared with the Academic Year 2022 – 2023. Refer Annexure-IV

23	**Range of CGPA&%of students** 10-8 CGPA: 7-8 CGPA: 6-7 CGPA: 5-6 CGPA: No. and percentage of failures: Success rate as per NBA guidelines:	Performance of students in Marks of Batch wise of 2020-2024 Total no. of students:132 7.5-10 CGPA:69 (First class with distinction) First class:51 Second class:04 Pass percentage:124/132=93.93% No.& percentage of failures:08 & 08/132=6.06% Success rate as per NBA guidelines: Pass percentage without backlogs :76/132=57.57%

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.	Scopus indexed :13 SCI / SCIE (Not ESCI) :17 Total :30 h-index: Dept.:100 with reference to google scholar. Highest in the faculty: 17: Dr.Subhojit Dawn
2.	Publications in conferences: - National (Scopus, SCI& equivalent) - International (Scopus, SCI equivalent) - Total:	National (Scopus, SCI& equivalent):0 International (Scopus, SCI equivalent):34 Total=34
3.	Faculty contribution in: ……..books: ……..book chapters: (Books/Chapters with ISBN/ISSN only are considered)	Books: 0 Book chapters:06
4.	Paper Publications& Book chapters:	Q1:08, Q2:10, Q3:10, Q4:01 Total:29 Book chapters:06
5.	Government: Funded R&D projects	Applied:03, Total Amount: Rs 75,26,031/-(SERB SURE) Ongoing: Nil, Total Amount: Nil Completed: Nil, Total Amount: Nil
6.	Non- Government: Funded R&D projects / Industry sponsored projects	Applied: Nil, Total Amount: Nil Ongoing: Nil, Total Amount: Nil Completed Nil, Total Amount: Nil
7.	Faculty involved Consultancy& amount earned	Faculty involved Consultancy:Dr.P.V.R.L.Narasimham Amount earned:1 lakh
8.	Faculty intellectual property rights / Patents:	Filed:03, Published:03, Granted:01
9.	In-house R&D grants &projects and Their outcomes (Seed Grant)	In-house R&D grants &projects :02 Outcome: • One Indian Patent published • Students secured second prize with cash prize of Rs.10,000/- in innovation fair organized by Design Innovation Center, JNTUK, Kakinada during 27-28, March 2024.

10.	New research facilities/laboratory Facilities added	Laboratory facilities added: **Refer Annexure –V**
11.	MOU' s with industries/R&D/Premier Institutes Details of activities:	02(1.Peepuls Agri Ventures LLP 2.Skill Desire) Details of activities: Peepuls Agri Ventures LLP • According to MoU company will provide 5 Lakhs per year to develop AGROBOT (Developing the robot in agricultural applications) • Resource persons from Peepuls Agri Ventures LLP come on holidays to train the students.
12.	Research centers of excellence established: Outcome in research centers:	JNTUK R&D Center. Outcome: The faculty are guiding PhD scholars.
13	Skill development centers established: outcome:	Yes APSSDC -01 SEIMENS Lab:03 labs related to EEE 1.Energy Studies lab 2.Low voltage switchgear lab 3.Drives lab **Outcome:** Lab experiments was done by students (PS lab, PLC and SCADA lab)
14	Incubation centers: - Established with outside Industries: -Status of incubation:	• Entering into MOU with OI Tech Solutions, Vijayawada. The space has been allocated in the college campus.
15	Start-ups & Entrepreneurships: No of Start-ups & status: Awards from outside platforms:	No of Start-ups:01 Status: Start-up registered(Chitti Motors Private Limited)

V. Infrastructure and Learning Resources		
S. No	**Criterion**	**Observations**
1.	Addition of infrastructural facilities to improve the teaching learning process Classrooms / Laboratories /ICT class rooms / e- class rooms/ Seminar halls / Syndicate rooms /Innovation center:	Infrastructure to support Lab taken to class(LTC), Zoom, Google meet and Webex. ClassRooms:05(EE111, EE112, E113, EE201, E202) Laboratories:10+1(Project room+ Innovation center) Seminar halls: 02(210A,210B) *seminar halls are also used for ICT class rooms Syndicate rooms: Nil
2.	Internet facilities for faculty &Students: IQACACADEMICAUDIT	1. The College has 1030Mbps Internet bandwidth to facilitate entire college with redundancy leased-line connections. The bandwidth is sourced from Reliance Jio, Tata Tele Services and BSNL (NMEICT). 2. Presently, 100+ CISCO access points have been installed to provide 24×7 Wi-Fi facility in the entire Campus & Hostels. All the Access Points are Licensed. 3. The high-quality persistent bandwidth offers high speed and uninterrupted Internet connectivity from anywhere on the campus through the campus LAN

		& Wi-Fi with Load Balancing & Network Redundancy Technology. The Campus has 1Gbps OFC backbone support with underground cabling. All Departments have CISCO network switches, which are connected to the central server room. No. of Wi-Fi points:11 in the department
3.	Technical manpower support added:	NIL
4.	Modern/new equipment added in Laboratories:	Refer Annexure-V
5.	New research facility /Computing facilities/ laboratory added:	laboratory added :EV Lab
6.	Dept. Newsletter/magazine:	Prepared Annually
7.	Department library: New additions Text books / References / Journals	Text Books /References:00 Magazines:02(Electronics for you, Electrical India) Journals: 01(ieema journal)
VI. Student information, Support and Progression		
S. No	**Criterion**	**Observations**
1	Industrial visits	Three Industrial visits were arranged.
2	Internships	III year Students: Full time internships: 131 students (6 Weeks) (without Stipend) Full time internships: 06 students (6 Weeks) (with Stipend) IV year Students: Full time internships:132 students (16 weeks) With Stipend:39 Without Stipend:93 Internships through placements (with Stipend):07
3	Dept. student clubs: Activities:	**Siddhartha Electrical Association (SEA)** **Clubs:** **1.Electric Vehicle Club (EV Club):** • This club has 30 active members. • Training programs conducted in regular intervals. • Faculty in charge of this club is Dr. K. Dhananjay Rao. **2.Drone Club:** • This club has 25 active members. • Training programs conducted in regular intervals • From the Drones club, two Drones were developed in the institute. • Faculty in charge of this club is Dr. J. Vimala Kumari **3.Robotics Club:** • This club has 25 active members. • Department has the MoU with Peepuls Agri Ventures LLP

		• According to MoU company will provide 5 Lakhs per year to develop AGROBOT (Developing the robot in agricultural applications) • Resource persons from Peepuls Agri Ventures LLP come on holidays to train the students. • Faculty in charge of this club is Dr. T. Naveenkumar
4	Details of coaching provided for GATE /GRE/any other competitive exams	------
6	Students qualified in -GATE -GRE/etc.	Total 16 students qualified in different competitive examinations. GATE:03 GRE/TOEFL/IELTS:13
7	Students admitted for Higher studies (No & %):	Total 07 Students admitted for Higher studies Percentage:07/132=5.3% Refer Annexure VI
8	Total Placements (No & %) in the Dept: 2 - 4 Lakhs (No.) 4 Lakhs-5Lakhs (No.): 5 Lakhs above (No.): Highest salary (No.): Median salary:	Total No of Students : 132 Total No of eligible Students : 109 Total No of Placements : 106 Total No of Selected students : 77 **% Placements with respective Eligible Students: 77/109=70.64%** % Placements with respective intake : 58.33% 2 LPA to 4 LPA :66 4 LPA to 5LPA :33 5 LPA ABOVE :7 Highest Package : 8 LPA Average Salary : 4.16 LPA No of students placed in Core Companies : 54
9	Student prizes:	NSS/NCC…01…..Cultural…0 … Sports……0…… National Level, if any…0…… Technical Prizes:04 1.Drones contest,2. Innovation Fair, 3. Quiz,4. Quiz. Nontechnical Prizes:02
10	Student Scholarships:	• Siddhartha Sahaya Scholarships :10 • North-South foundation Scholarships:11 • South Central railwaya:02 • R.C.M.church:01 • Mother Theresa Trust:01 • Dr.Y.V.S.Murthy Charitable Trust:02 • Akhila Bharata Maha Mandal,Hyd:01

VII. Governance, Leadership and Management		
S. NO	**Criterion**	**Observations**
1	Setting of annual goals by individual faculty for their academic	HoD collects the goals of faculty from every faculty member based on the goals set for the department for

	improvement.	that A.Y. once in a semester.
2	Setting of departmental annual goals by HOD for the improvement of dept.	• Improvement in Pass percentage, • Number increase in good quality of Publications, research funding from Industry/alumni/Non Govt., • Number increase in filing patents • Improvement in placements and higher studies • Incubation, startups and entrepreneurs etc.
3	Teaching staff attended for skill development/ Industry training/any professional development programs	1..Venkatesh and S.N.V.S.K.Chaitanya trained-HiTech Automation Limited ,Tadigadapa,Vijayawada. 2.Dr.P.V.R.L.Narasimhan,Dr.J.Vimala Kumari,Dr.K.Dhanajay Rao and Dr.D.Indira-Kcombinator
4	Non-teaching staff attended For skill development programs	• 3- Non teaching staff attended Three day workshop on "Electric Vehicle", organized by the Sytiqhub Educational Services Pvt.Ltd. in department of EEE, VRSEC, Vijayawada. • All Non-teaching staff have participated in product demos given by the suppliers during the delivery of the equipment and got trained on that equipment.
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:	• Seed Grant for faculty: Rs.2.9 Lakhs • Incentive for Sponsored projects: Nil • Incentive for paper publications: Rs.43,500/- • Attended FDPs/Seminars/R & D interactions through online: ----
6	Financial support received from the Management: Student Projects: Model developments& exhibition: Student Innovations& exhibition:	**Student Projects, Model developments& exhibition:** **Drone Club:**An amount of Rs. 2,02,000/- was sanctioned for the Drone Club by the management in the A.Y. 2023-24. (Training programs conducted in regular intervals.From the Drones club, two Drones were Developed in the institute.). **EV Club:** An amount of Rs. 72,000/- was sanctioned for the EV Club by the management in the A.Y. 2023-24. • Utilized for EV training by industry ("Sytiqhub,Surampalli, Vijayawada"). **Student Innovations& exhibition:** An amount of Rs. 70,000/- was sanctioned for the student innovations by the management in the A.Y. 2023-24. • Utilized for development of low cost smart electric two wheeler.(Chitti Pi 15). • An amount of Rs 2.5 lakhs was sanctioned in the A.Y: 2019-20 under seed Money. The above amount is being utilized for model developments like

		• Development of Inverter. • Design of multifunction meter is in progress (Prototype model is Completed) by utilizing same amount for the A.Y 2021-22.
	Quality policy& Quality objectives Committees &duties: Cells & duties:	**Quality Policy:** VRSEC strive to impart Knowledge, Skills and Attitude through continuous improvement to meet the ever-changing needs of Industry and for the Sustainable Development of society. **Quality objectives:** 1.Excellence in Teaching and Learning. 2.Comprehensive professional growth of students. 3.Enhancing R&D activities. 4.Revising the curriculum according to industry needs. 5.Involving an industry in academic activities of the department. **Committees:** 1.Program Assessment Committee (PAC) 2.Department Advisory Board (DAB) 3.Board of Studies (BOS) 4.Module coordinator committee 5.Course coordinator committee
8	Maintenance -General -Laboratory -Others	• Periodical maintenance of Academic facilities and physical facilities are well maintained. • Budget utilized for laboratory maintenance :Rs 3,29,656/- (Recurring)
9	Financial support/leaves for qualification/skill up-gradation:	1 Financial support: An amount of Rs 43,500/- was received by faculty as an incentive towards paper publication in reputed journals and conferences. 2. Skill up-gradation: Special Casual leaves for P.hD reviews (SCL),OD etc.
10.	Risk evaluation /safety measures:	The following safety measures are incorporated to mitigate the risk. • First aid kit, • Fire extinguisher • Electrical safety mats • Display of emergency phone nos.

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Dept.I QAC In-charge **Academic Auditor** **Head of the Dept.**

Academic Audit Report (Consolidated)

1. **Name of Department**: Electrical & Electronics Engineering . Year: 2023-24
2. **No: of full time permanent faculty** : 26
3. **No: of Visiting/Adjunct faculty** : 01
4. **No: of PG/UG courses** : PG:01 UG:01
5. **Curriculum Revisions Information**: UG:VR20,VR23 PG:M.Tech19

   Major changes: Introducing minor program and Honor program in VR20

   New courses: 1: Design Thinking,
   Program Elective 1: Artificial Neural Networks and Fuzzy Logic/
   Data Communication and Networking(20EE5404),
   Open Elective-2/ Job oriented elective-2: Machine Learning using Python/Electric Vehicles(20EE6205)

   Modified courses (min 20-25% change) :07/53=13.20%

   Employable courses:26
6. **Research**: Ph.D. Theses submitted:…00……awarded:…01……

   Faculty guiding Ph.Ds: 04

   Publications in Jrs: SCI/SCIE…17……Scopus……13…..Total……30.

   Publications in Conferences: SCI/SCIE 0 Scopus: 34 Total: 34.

   Student Publications:

   -UG: SCI/SCIE:… 0 Scopus: 31 WoS:…0….. Others:…00…..Total: 31

   -PG: SCI/SCIE: …0 Scopus: 03 WoS: 0 .Others: 00 .. Total: 03

   Dept H-index (Scopus data base): 100 . Highest H-Index of faculty: 17

   Publications: Q1 : 08 Q2: 10, Q3:10 Q4:01, Total: 29
7. **Sponsored projects: A**mount: Rs 75,26,031/- Applied:03,Ongoing: 00, completed: 0
8. **Consultancy Amount earned: Rs 1,00,000/-**
9. **Start-ups & Entrepreneurship**: No: 01, Awards from outside platforms: 0.
10. **Incubation centers:** established: A.Y.2017-18, Status of incubation: The dept. has developed many working models.
11. **Patents**: Filled: 03, .Published: 03, Granted: 01.
12. **Innovations**: 02, Awards from outside platforms (reputed Institutions only) : 04.
13. **Books / Book chapters** (with ISBN/ISSN only are considered): 06
14. **e - Content developed:** Lectures added to Web-resources: 100% in LMS/WhatsApp groups/Group mails.
15. **Placements:** No: 106, Percentage: 70.64%, Median salary: 4.16 Lakhs., Highest salary: 8 lakhs.
16. **Higher Education:** GATE No: 03., GRE No: 04, Others (specify):09
17. **New Equipment and Infrastructure** added: (Name: EV Lab & amount: Rs.10,50,320/-)
18. **Student feedback** on Curriculum, infrastructure and facilities: Yes or No----YES
19. **Strengths**:
    a) Revised curriculum meets the requirement for students' knowledge growth in terms of advancement and interdisciplinary.
    b) Effective teaching-learning process and evaluation is being implemented.
    c) Good governance and management are followed to achieve the quality metrics.
20. **Weaknesses** (mandatory field to fill):
    a) Online programs / webinars are not conducted.
    b) No international event is conducted.
    c) No new text books are added to department library
    d) No field projects executed by the students

20. **Suggestions for improvement** (mandatory field to fill):

a) Collaborative events shall be planned with industries / government organizations.

b) More number of extra / co-curriculum activities of students should be encouraged effectively.

c) Faculty should apply for sponsored project grants to enhance their research profile.

22. Document addressing previous academic year weaknesses and suggestions for improvement.
Enclosed: **Yes / No**. If '**yes**' enclose an appropriate document. If "**No**" furnish proper explanation.

……..	**……..**	**…….**
Dept. IQAC In-charge	Academic Auditor	Head of the Dept.

IQAC Coordinator

Annexure-I

Editor-ships /Reviewer-ships

S.No	Name of the Faculty	Journal, Issue &No/ Proceedings	ISBN/ ISSN	Reviewer/ Editorial Board Member
1	Dr.G. Srinivasa Rao	Journal of the Institution of Engineers Springer Series B (Scopus)	2250-2114	Act as a Reviewer
2	Dr. B. Venkateswara Rao	Electrical Power and Energy Systems (SCI)	0142-0615	Act as a Reviewer
		COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineering (SCI)	0332-1649	
		IET Renewable Power Generation (SCI)	1752-1416	
		Advances in Electrical Devices	-	Editor-in-Chief
		Journal of Controller and Converters	-	Editorial Board Member
		International Journal of Advanced Electrical Technology and Research	2278-8948	Editorial Board Member
3	Dr. Subhojit Dawn	IEEE Transactions on Power Systems (SCI)	0885-8950	Act as a Reviewer
		Energy (SCI)	0360-5442	
		Renewable Energy (SCI)	0960-1481	
		IET Renewable Power Generation (SCI)	1752-1416	
		IET Generation, Transmission & Distribution (SCI)	1751-8687	
		Electrical Power and Energy Systems (SCI)	0142-0615	
		Applied Energy (SCI)	0306-2619	
		Renewable & Sustainable Energy Reviews (SCI)	1364-0321	
		IEEE Access (SCI)	2169-3536	
		Sustainability (SCI)	2071-1050	
		Journal of Electrical Engineering & Technology (Springer) (SCI)	2093-7423	Associate Editor
		Journal of Electrical and Power System Engineering	2582-5712	Editor
		American Journal of Electrical Power and Energy Systems	2326-9200	Editorial Board Member
		International Journal of Energy Policy and Management	2472-9493	Editorial Board Member

		Journal of the Institute of Electronics and Computer	2643-8240	Editorial Board Member

Annexure-II

Faculty as resource persons in webinars/workshops/ key note speaker /training activities

A.Y.2023-2024					
S.No	Name of the Faculty	Designation	Name of the Event	Duration	Organized by
1.	P.Venkatesh	Assistant Professor	MATLAB EXPO 2023 India	20-07-2023	P.B.Siddhartha College of Arts &Science
2.	S.V.R.L Kumari	Associate Professor	MATLAB EXPO 2023 India	20-07-2023	P.B.Siddhartha College of Arts &Science
3.	V.Ravindranath Chowdary	Assistant Professor	Amazon Web Services (MLops)	07/06/23 to 07/07/23	IETE Ranchi and Pantech e learning
4.	V.Ravindranath Chowdary	Assistant Professor	Battery Management System	16/09/23 to 16/10/23	IETE Ranchi and Pantech e learning
5.	V.Ravindranath Chowdary	Assistant Professor	Machine Learning	01/09/23 to 30/09/23	IETE Ranchi and Pantech e learning
6.	Dr.G.Srinivasa Rao	Associate Professor	Regional Meet Institutions Innovation Council MoEs Innovation cell	06-01-2024	Koneru Lakshmiah Education Foundation
7.	Dr.G.Srinivasa Rao	Associate Professor	Innovative Bharat-IIC Regional Meet 2023	06-01-2024	Koneru Lakshmiah Education Foundation
8.	V.Bindu	Assistant Professor	PPT on Energy conversion Technologies	13-12-2023	SDMSM Kalasala, Vijayawada
9.	K.Lalitha	Assistant Professor	Expert talk on Master Class in Technical writing	04/03/2024 to 08/03/2024	OP Jindal University, Raigarh
10	Dr.Indira	Assistant Professor	Reviewer in the conference “2024 IEEE Students Conference on Engineering and Systems (SCES-2024)	June 21-23, 2024	Motilal Nehru National Institute of Technology Allahabad
11	Dr.G.Srinivasa Rao	Associate Professor	"Inspire to Invite" as part of IIC impact lectures	28/6/2024	D M S S V H College of Engineering, Machilipatnam

Annexure-III

Activities of students in professional bodies

Sl.No	Professional Chapter	Date	Event Name	No. of Students Participated
1	IE(I)	16/08/23	A Seminar on Electric Vehicle	81
2	IE(I)	23/08/23	Awareness on Professional Societies (IEEE, IE, ISTE)	100
3	SEA	30/08/23	Facility of Project room and library in the Dept.	123
4	IE(I)	13/09/23	A Workshop on Technical Speech	45
5	IE(I)	20/09/23	A Guest Lecture on Fuel Cells based Electric Vehicles	85
6	IE(I)	27/09/23	A Seminar on Cutting-edge agricultural robot	101
7	IE(I)	30/09/23 To 02/10/23	A Hands-on training on Electric Vehicles	80
8	IE(I)	18/10/23	A Seminar on Tech Debate	38
9	IE(I)	04/11/23	A Guest Lecture on Power Grid Operation and Control	115
10	IE(I)	14/12/23	Energy awareness rally, organized by Govt. of AP	100
11	IE(I)	19/12/23	A Guest Lecture on Save Energy and save world conducted in association with State Centre of IE(I),Vijayawada Resource Person:Er. R.V.Ramana	90
12	IE(I)	24/01/24	A Guest Lecture on Career Awareness Program	37
13	IE(I)	31/01/24	A Guest Lecture on Multilevel Inverter design for EV Applications	82

Annexure –IV

Cut-off rank Previousyear:2022-23 and Cut-off rank in A.Y.:2023-24

EAMCET				
Category	**General**		**Female**	
	2022-23	2023-24	2022-23	2023-24
OC	49272	36696	47315	36589
BC-A	97100	78754	100028	77745
BC-B	102383	----	124255	69102
BC-C	-	-	-	-
BC-D	54417	50108	67719	49880
BC-E	-	61605	102124	111103
SC	116916	105277	162793	99331
ST	137628	132143	-	132099
CAP	-		-	
NCC				
PH	-		-	
SPORTS	-		-	
EWS	61913	52834	58814	54690
ECET				
OC	37	**150**	-	**305**
BC-A	-	**345**	-	
BC-B	-	**204**	-	**410**
BC-C	-		-	
BC-D	157		-	
BC-E	-		-	
SC	-	**718**	-	
ST	1438		-	

Annexure –V
2023-24 Utilization Non-Recurring

Expenditure on purchase of equipment- Total Rs: 23,08,020.14/-

S.No	Laboratory in which it is used or if a new lab is set up -details	Nature of the equipment	Amount spent Rs
1.	Electrical Measurements and control systems lab	1.Digital Storage Osciloscope-3	1,59,268.14/-
2.	Power Systems Lab (UG)	1. Vector Grouping of three Phase Transformers. 2. Fault location of under-ground cable. (Murray-loop test) 3. Determination of string efficiency of string insulator. i) Without guard ring ii) With guard ring.	2,05,320/-
3.	Electronics Lab	1.Function Generator-7 2.Universal ICtester-1 3.Clamptester-1 4. Digital Soldering Station - Voltage - 120 Volts Wattage - 70 Watts ; Included Components, Soldering Iron, Sponge (Weller)5. Soldron 740 Station (3 In 1)-2 6. Analog Boards Trainer Kits 7.Digital boards Trainer Kits 8.Digital Ammeters -0-200mA-DC (variable) - Multirange 9.Digital Ammeters -0-200mA-DC (fixed) 10.Digital Ammeters -0-200mA-AC (Variable) - Multirange 11.Digital Ammeters -0-200mA-AC (fixed) 12.Analog Ammeters -0-200mA-DC with Stand MR 100 Model 13.Analog Ammeters -0-200mA-AC with Stand MR 100 Model.	2,85,518/-
4.	Electrical Machines Lab	1.Wattmeters And Digital Multi Range Meters 2.Non-Contact Voltage Detector 3.Powerguard 4. Vector Grouping of three Phase Transformers.	1,95,358/-
5.	IOT lab	Nuclei F446Re Boards	1,13,752/-

6.	Power Electronics Lab	1.Single Phase Ac Voltage Controller With R &Rl Loads And Firing Circuit: 2. Buck/Boost Chopper Module And Firing Circuit: 3. Boost Chopper Module And Firing Circuit 4. 1-Phase Mosfet Based H-Bridge Inverter: Ii) 1-Phase Igbt Based H-Bridge Inverter 5. Static Characteristics Of Scr, Triac, Diac, Mosfet And Igbt:- 6. Driver Unit – 6 Inputs Using Fast Switching Opto Isolator (3.3 V To 15v) For Firing The Mosfet 7. Single Phase Fully Controlled Bridge Rectifier With R & Rl Loads With External Firing Circuit (Switches Mosfet Based) 8. Single Phase Fully Controlled Bridge Rectifier With R & Rl Loads With External Firing Circuit (Switches Scr Based): 9. Three Phase Fully Controlled Bridge Rectifier with R & Rl Loads 10.Digital storage oscilloscope probes	2,98,484/-
7.	EV Lab	1. Battery charge discharge test setup 2. E-Vehicle two wheeler trainer setup (Battery with BMS) 3. Battery Operated Electric Vehicle-Four wheel	Rs.10,50,320/-

Annexure –VI
Higher Studies
Academic Year 2023-24

S.No	Roll No	Name of the Student	Higher Study Program Name	Admission Details (Name of the Institution/University)	Place	Rank	QS Rank
1	208W1A0264	B.Sumanth	M.Tech	VIT, Vellore campus	India		
2	208W1A0256	Sandeep Ventrapragada	M.Tech	VNIT, Nagpur	India		
3	208W1A0249	THARUN SRIRAMULA	M.Tech	VNIT, Nagpur	India		
4	208W1A0208	B.Gayatri Rama Tejaswini	PGDM	Siva Sivani Institute of Management	India		
5	208W1A0299	N.Sailaja	MS	Saint Louis University	US		
6	208W1A0B6	T.V.N.Hanumanth	MS	Florida Atlantic University	US		

7	208W1A0286	K.Akshith Roy	M.Tech	Nit,Durgapur	India		

V. R. SIDDHARTHA ENGINEERING COLLEGE :: VIJAYAWADA
(AUTONOMOUS)
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
Faculty Contribution for Arranging internship in A.Y 2023-2024

Sl No	***Name of the Employee***	***Organization Name*(Number of students)**
1	Dr. P. V. R. L. NARASIMHAM	Skill Dzire Technologies Pvt. Ltd (15)
2	Dr. A. RAMA DEVI	Schneider Electric India Pvt.Ltd (07)
3	Sri.S N V S K CHAITANYA	PEGA,(08) vem technologies Pvt Ltd(03) Viswasamudra Engineering Pvt ltd(02)
4	Sri.T. SUNEEL	BIST Technologies Pvt Ltd (35)
5	Sri. V. HARI VAMSI	Adept Talent Acquisition India Pvt Ltd(8)
6	Dr. K. DHANANJAY RAO	SytiqHub Educational Services Private Limited(3)

Annexure –VII
Faculty contribution in obtaining internships

4/4 B.Tech

Faculty Contribution for making MOU'S in A.Y 2023-2024

Sl No	***Name of the Employee***	***Organization Name***
1	Dr. P. V. R. L. NARASIMHAM	Peepul Agri Ventures LLP,Guntur
2	Sri.T. SUNEEL	Skill Dzire Technologies Pvt. Ltd

3/4 B.Tech

Sl. No	**Name of the Employee**	**Organization Name (Number of students)**
1	Dr. P. V. R. L. NARASIMHAM	Skill Dzire Technologies Pvt. Ltd (12) N-deep Technologies (22) AICTE-EDUSKILLS Virtual Internship (6)
2	Dr. P. V. R. L. NARASIMHAM	KCP Limited. (7)
3	Dr.D.Indira	NIT-AP (10)
4	Sri.S N V S K CHAITANYA	PLC Hi-Tech Automation (23)
5	Dr. K. DHANANJAY RAO	SytiqHub Educational Services Private Limited (5)