Geethanjali College of Engineering and Technology

(UGC Autonomous)

(Approved by AICTE and Permanently Affiliated to JNTUH)

Accredited by NBA and NAAC at A+' Grade)

(Cheeryal (V), Keesara (M), Medchal. Dist. 501 301)

Department of Electronics and Communication Engineering

Date: 06-02-2024

Note Submitted to Principal:

Sub: - Action Taken on the observations made during the External Academic Audit of AY 2022-23 - Reg.

The External Academic Audit for the year 2022-23 was carried out on 20th January, 2024 by a committee comprising of external members. Dr. V. Kumara Swamy, Professor in ECE and Assoc. Dean (Academics), Sreenidhi Institute of Science and Technology, carried out the audit in the Department of ECE. Based on the observations made during the inspection, a few suggestions were given by the committee which were indicated in the report submitted. The corrective measures have been initiated in the department as detailed below as per the suggestions made by the committee.

The Action Taken Report (ATR) is presented in the following table:

Criterion no. and Name	Remarks/ Comments made by the committee members	Action Taken On the Remark/Comments in Column-2
I. Vision, Mission and PEOs: **4.** Does the department follow a defined process for defining vision, mission and PEOs with the participation of all stakeholders-internal and external stake holders?	Participation of Industry, Alumni and Parents in Vision and Mission is missing	The department's Vision and Mission were defined during the initial years of establishment of the department, taking the Vision and Mission of the institution as reference. It is expected that the number of Alumni, Parents and contacts with Industry personnel to be significantly low during these initial years and therefore their participation in the framing of Vision and Mission was low and not on the expected lines. However as and when the institute's vision and mission are modified, accordingly the department's vision and mission will be modified. Involvement of stakeholders will be made better when the next revision takes place.
II. B. Teaching-Learning Process: 1.Does a defined process exist for design of program	Department Academic Committee meeting - Minutes Subject wise specialization groups	The college has a well-defined policy for the design and development of curriculum. As a part of that, feedback from stake holders such as Parents, Industry persons, Professional bodies, Alumni and internal faculty members was taken during the curriculum design of AR16/ AR18 and

curriculum?	is necessary	AR20. However subject-wise feedback from various specialized groups was not taken so far. In future we will incorporate this suggestion when the next revision of the curriculum takes place.
2. Are the structure and components of curriculum well balanced and appropriate (as per AICTE Guidelines)?	CBCS - If possible offer 4-2 subjects in previous semesters – placements can be improved	In one of the meetings of the College Academic Council with Dr. N. Yadaiah as the nominee from JNTUH, it was suggested to continue having a few theory courses in 4-2 to ensure that students attend the college in 4-2.
3.Is a valid process followed for mapping of curriculum with POs and PSOs?	Need training to faculty on POs and PSOs mapping	Faculty members are trained every year by conducting workshops on various academic matters including POs and PSOs mapping. Most of the faculty members are well versed with the procedure for mapping of COs with POs and PSOs. In fact the course coordinator of each course with the help of other faculty members taking that course does the mapping and the COs attainment.
4.Is Employability a major consideration in the overall development of the curriculum	List of subjects with employment with BoS chairman signature	List of subjects that provide employability is already available. As suggested signature of the BoS chairman (HoD) will be taken on the list.
17. Particulars of industry supported laboratories established, if any. Is impact analysis of industry interaction made and if, so, is action taken based on the results of the analysis?	To be improved	Industry supported laboratory was established in the department with the help of M/s Physitech Electronics, Hyderabad. With the resource persons from M/s Physitech Electronics, so far 3 FDPs were conducted in the department to train some of our faculty with regard to usage of the sponsored equipment. Efforts will be made to improve the interaction.
20. Is Impact analysis of internship made and action taken on the basis of the results of the analysis?	Impact analysis to be improved	Under AR18 and AR20 Regulations, Internship has become mandatory for the students during the summer vacation of II Year II semester. Impact of internship is measured by taking feedback from students on specific aspects of internship.
21. Average number of days from the date of last semester-end examination till the declaration of results	UG 84 days May conduct theory exams followed by lab	It is observed that the valuation of the answer scripts is done within 30 days of conducting the semester end exam but due to procedural delay in the approval of results by JNTUH, the average number of days from the date of last semester-end examination till the declaration of results, is found to be high. With regard to the suggestion given by the

		committee of conducting theory exams followed by practical exams to decrease this gap, a decision needs to be taken at the college level.
III Course Outcomes and Program Outcomes 3. Are course articulation matrix, program articulation matrix tables prepared?	Many faculty are unable to explain CO - PO attainments	• Most of the faculty members are aware of the process involved in the computation of COs attainments. • Special workshops were conducted on the Outcome Based Education (OBE) to make the faculty familiarize with various aspects of OBE including the CO-PO attainments. • In fact the COs attainment for each course would be computed by the respective faculty members who teach the course. Those who have joined recently would probably need more time to understand the attainment process of COs.
4. Is appropriate assessment process for attainment of course outcomes followed including data collection, verification, analysis and decision making?	Target fixing must be different for difficult and easy subjects	At the college level a common decision is taken to keep a target of 70% for all the courses after becoming an autonomous institution. Also trying to achieve higher levels of target is always desirable, irrespective of whether the subject is difficult or easy.
IV Students' Performance 2. Percentage of students who graduate the program in four years, without repeat of any course? 3. Percentage of students graduating the program with backlogs within 4 years? 4. Mean CGPA of students (who were promoted to 3rd year) at the end of 2nd year	To be improved	Considerable efforts are being made to bring improvement in all the three aspects that are identified and mentioned in the audit. Towards this the department is planning to conduct Assignment Tests weekly in all theory courses from AY 2023-24. It is also decided to adopt more student-centric teaching methods such as experiential learning, project based learning and other such methods that focus on increased participation of students.

7. Number of students turned entrepreneurs in Engineering and Technology	Students to be encouraged	• Ideas proposed by two students, namely, Mr. R Sujith (19R11A0438) of B.Tech (ECE), III Year and Mr. J Manish (20R11A0482) of B.Tech (ECE), II Year were incubated with the assistance of the IIC of the college and subsequently a start-up "Samyagdrushti" was established by these student entrepreneurs during the year 2022-23. This start-up was incorporated as a section-8 company. • In addition to the above, at the college level various programs are conducted through Entrepreneur Development Cell (EDC) to guide the students towards becoming entrepreneurs. • Institution Signed an MoU with T-Hub Foundation on 19th July, 2023 to be part of the Kickstart Program. The objective of the program is to work towards a long-term mechanism to promote cooperation in supporting technology driven startup companies and thus creating a holistic ecosystem for advancements in innovation in the country. As part of this program, students are shortlisted by a defined process and are trained by T-Hub mentors on a plethora of aspects involving Incubation and Innovation.
V Research and Development 3. Sponsored research (funded) undertaken and its value in Lakhs of Rupees.	To be improved	• The research project "Development of novel carbon nanotube/polymer nano composite materials for EMI applications" funded by DRDO, Kanpur to the tune of Rs. 45.81 lakhs, was completed successfully in September 2022. • Two projects were applied under SERB during December 2023 for a total amount of Rs. 37.5 lakhs • Apart from this, at the college level research projects are being encouraged by providing seed amount to a maximum of Rs. 10.00 lakhs.
4. Number of development activities undertaken by faculty: • Product development • Working models	To be improved	• Faculty members help the students and encourage them to participate in Hackathons, Ideathons and other such project competitions. In this process several working models were developed and some of them were patented also. During the academic year 2022-23, Four

		patents were published by the faculty members.
		• Apart from the above, the department organizes "Tech Fest" every year to identify the best student projects, majority of them are working models carried out by students under the guidance of faculty.
		• Of late students with the help of faculty members are developing working models which address various societal problems under the course "Design Thinking" and under "Project Based Learning" in some of the courses.
5. Consultancy services offered and their value in Lakhs of Rupees.	No consultancy work	The department could not do any consultancy work during the academic year 2022-23. However the department is doing consultancy works of worth Rs. 14 lakh during the present academic year of 2023-24.

Strengths, Weaknesses, Concerns and Deficiencies

Column-1	Column-2	Column-3
Criterion no. and Name	Remarks/Comments madeby the committee members	Action Taken on the Remark/Comments in Column-2
Strengths	1. Experience faculty 2. Continuous updating of website 3. Specialized Groups of Faculty 4. Project Based Learning	
Weaknesses	1. CO-PO attainments need more emphasis to junior faculty.	• Most of the faculty members are aware of the process involved in the computation of COs attainments. • Special workshops were conducted on the Outcome Based Education (OBE) to make the faculty familiarize with various aspects of OBE including the CO-PO attainments. • In fact the COs attainment for each course would be computed by the respective faculty members who teach the course. Those who have joined recently would probably need more time to understand the attainment process of COs.

	2.Value Added Courses to be increased	At present the department is offering the following Value Added Courses
		   a. Advanced Data Structures during II Year I semester
		   b. Python for Data Analytics during II Year II semester
		The department is not able to offer any Value Added Course in III Year as students would be given Placement training during III Year – I and II semesters.

	3. Quality of Students to be improved.	It is a fact that the Best Rank of the student admitted has gone down compared to last year but the Highest Rank of the student admitted has improved. As there is a huge inclination towards Computer science oriented branches in last two years, students with good rank prefer to join these branches. Similar kind of situation is prevalent in all other colleges.
Concerns	1. Consultancy services to be improved.	1. The department could not do any consultancy work during the academic year 2022-23. However the department has done consultancy work during 2021-22 and is doing for Rs. 14 lakh during the present academic year of 2023-24.
	2. Publications to be improved.	2. Faculty members have published 4 Patents, 26 journal papers and presented 10 conference papers during 2022-23.
	3. Industry supported labs to be improved	3. Industry supported laboratory was established in the department with the help of M/s Physitech Electronics, Hyderabad. With the resource persons from M/s Physitech Electronics, so far 3 FDPs were conducted in the department to train some of our faculty with regard to usage of the sponsored equipment. Efforts will be made to improve the interaction.

| Deficiencies | 1. Entrepreneurs not there | 1. Ideas proposed by two students, namely, Mr. R Sujith (19R11A0438) of B.Tech (ECE), III Year and Mr. J Manish (20R11A0482) of B.Tech (ECE), II Year were incubated with the assistance of the IIC of the college and subsequently a start-up "Samyagdrushti" was established by these student entrepreneurs during the year 2022-23. This start-up was incorporated as a section-8 company.

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 Apart from this, at the college level research projects are being encouraged by providing seed amount to a maximum of Rs. 10.00 lakhs |

Copy to:

1. Overall IQAC- Coordinator, GCET
2. Dean (Academics)
3. Dean (Administration)

Dr G. Sreelakshmi

HoD, ECE.