

**Sri Sivasubramaniya Nadar College of Engineering
(Autonomous)**

Old Mahabalipuram Road, Kalavakkam -603110

IQAC -External Audit

Date of the Audit: 23.09.2022

List of External Auditors

S.No.	Name	Designation	Institution	Department assigned
1	Dr M Sasikala	Professor	CEG Campus, Anna University	Bio-Medical Engineering
2	Dr. P.K.Jawahar	Professor	B.S.Abdur Rahman Crescent Institute of Science & Technology	Chemical Engineering
3	Dr.V.Prasanna Kumari	Professor	Dept of MCA Rajalakshmi Engineering College	MBA Department
4	Dr.S.Srinivasan	Professor and Head	Department of Instrumentation Engg, MIT Campus, Chrome pet, Anna University	Mechanical Engineering
5	Dr Sendhilkumar S	Associate Professor	Department of Information Science & Technology CEG, Anna University	Computer Science Engineering
6	Dr. Rajesh Kanna B	Professor	School of Computer Science and Engineering, VIT Chennai.	Humanities and Social Sciences - First year
7.	Dr.Mary Anita Rajam V	Professor	Department of CSE CEG Campus, Anna University	Electronics and Communication Engineering
8.	Dr.Nakeeran	Professor and Head	School of Electronics and Technology, Pondicherry University	Civil Engineering
9.	Dr. Sreenath N	Professor	Pondicherry Engineering College	Information Technology
10.	Dr. Gunabalan R	Associate Professor	School of Electrical Engineering, VIT University, Chennai	Electrical and Electronics Engineering

Completed on 23/09/2022

Jawahar
Co-ordinator IQAC

Sri Sivasubramaniya Nadar College of Engineering
(Autonomous)
Old Mahabalipuram Road, Kalavakkam -603110
Tamil Nadu - 605 006
Phone: 044-26374000, 26374001, 26374002
Fax: 044-26374003
Email: ssnadar@ssn.edu.in, ssnadar@ssn.ac.in
Website: www.ssn.edu.in, www.ssn.ac.in

SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING

Rajiv Gandhi Salai (OMR), Kalavakkam – 603 110, TN, India

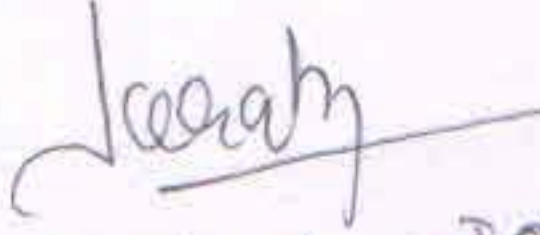
NAAC Academic Audit

Date: 23.09.2022

IQAC -External Audit

SCHEDULE

Time	Activity	Ownership
08:30am – 09:00am	Receiving the Expert members and Breakfast	IQAC Coordinator
09:00am – 09:20am	Interaction with Principal/ Vice Principal	Conference Hall, IQAC Coordinator
09:20am – 09:30am	To reach to the respective departments	Department IQAC Coordinator
09:30am – 09:50am	Meeting with the department team	HoD and team
09:50am – 10:20am	Department Lab Visits	Respective Lab In-charges
10:20am – 10:30am	Tea break	
10:30am – 12:15 pm	Department Files verification	Department IQAC Coordinator
12:15pm - 01:00pm	Lunch	
01:00pm - 01:30pm	Department Files verification (Cont..)	Department IQAC Coordinator
01:30pm - 01:40pm	Interaction with Non-Teaching Staffs	Non-Teaching Staffs
01:40pm - 02:00pm	Interaction with Teaching Staffs	Teaching Staffs
02:00pm - 02:15pm	Report Preparation	Expert Member
02:15pm - 02:30pm	Feedback of the department - Meeting with HoD and Faculty	HoD, All Staff members
02:30pm - 02:45pm	Exit feedback – Experts team Meeting with principal and Vice principal	IQAC Coordinator


Dr. N. VENKATESWARAN, Ph.D.,
Professor
Department of Biomedical Engineering
SSN College of Engineering
Rajiv Gandhi Salai (OMR)
Kalavakkam, Tamilnadu, India - 603 110

**Department:****Academic
Year:
2021 – 2022****External Audit: IQAC****Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam****Academic Audit Form**

Department Information		
Name of the Department		
No.of Full time permanent Faculty		
No.of Guest faculty		
Academic Programmes in the Department	UG	
	PG	
Student Strength Programwise	UG	
	PG	
No.of PhD Students	FT	
	PT	
Name, designation and affiliation of the External Expert		
Signature of the External Expert		
<ul style="list-style-type: none">▪ The External Expert can grade each parameter with points 1,2,3,4 or 5 based on assessment.▪ Wherever applicable, ratings may be based on the data available for the last three academic years.		

Criterion 1: Curricular Aspects						
Key Indicators	Scope of Audit	Rating				
		1	2	3	4	5
1.1 Curriculum Design and Development	Curricula developed have relevance to the local/ national / regional/global developmental needs					
	Adequacy of syllabus revision carried out					
	Number of courses having focus on employability/ entrepreneurship/ skill development					
1.2 Academic Flexibility	Number of new courses introduced to the total number of courses in each program					
	Implementation of Choice Based Credit System (CBCS) / elective courses					
1.3 Curriculum Enrichment	Courses relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics in the Curriculum					
	Number of value-added courses imparting transferable and life skills					
	Percentage of Students enrolment in the value-added courses					
	Percentage of students undertaking field projects / internships					
1.4 Feedback System	System of receiving feedback from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents, for design and review of syllabus					
	System of Feedback collection, analysis and action taken					
Observations & Suggestions:						

Criterion 2: Teaching- Learning and Evaluation						
Key Indicators	Scope of Audit	Rating				
		1	2	3	4	5
2.1 Student Enrolment and Profile	Percentage of students in the department from other States					
	Demand Ratio for the available seats.					
	Percentage of seats filled as per the applicable reservation policy.					
2.2 Catering to Student Diversity	Department assesses the learning levels of the students and organises special programs					
	Evidence of mentoring process and System to ensure motivation of slow learners					
	Student - Full time teacher ratio.					
	Percentage of differently abled students (Divyangjan) on roll.					
2.3 Teaching-Learning Process	Preparation of course files and adherence to Teaching plans by the faculty members					
	Adaptation of Student centric teaching methods, such as experiential learning, participative learning and problem solving methods					
	Use of Learning Management Systems (LMS) and timely availability of COs/ Course Plan/ Lecture Notes/ PPTs etc.					
	Ratio of students to mentors for academic and stress related issues					
2.4 Teacher Profile and Quality	Percentage of full time faculty against sanctioned posts					
	Percentage of full time faculty with Ph.D.					
	Teaching experience of full time teachers in number of years					
	Percentage of teachers received awards, recognition, fellowships at State, National, International level					
	Percentage of full time teachers from other States					
2.5 Evaluation Process and Reforms	Department ensures fairness in the evaluation of answer scripts					
	Question Paper explores all the elements of Blooms Taxonomy in assessment.					
	Evaluation of the performance is in accordance with the course objectives.					
	System for student complaints/grievances about evaluation					
	Automation of Examination process					
2.6 Student Performance and Learning Outcomes	POs, PSOs and COs for all Programmes offered by the department are stated and displayed,communicated to teachers and students					
	Attainment of program outcomes, program specific outcomes and course outcomes are computed for the different batches.					



Department:

Academic
Year:
2021 – 2022

External Audit: IQAC

	CO-PO attainment is computed and the gap analysis is performed for the courses of the department					
	Availability of semester-wise result analysis for all the batches and average pass percentage					
2.7 Student satisfaction Survey	Student satisfaction survey report regarding teaching learning process.					

Observations & Suggestions:

Criterion 3: Research, Innovations and Extension						
Key Indicators	Scope of Audit	1	2	3	4	5
3.1 Promotion of Research and Facilities	Policy for promotion of research within the department.					
	Use of SSN internal funding for research.					
	Number of teachers awarded international fellowship for advanced studies/research during the last five years.					
	Central facilities within the department for research.					
3.2 Resource Mobilization for Research	Grants received through research projects sponsored by the government and nongovernment sources.					
	Percentage of teachers recognised as research guides					
	Number of research projects per teacher funded by government and non-government agencies					
3.3 Innovation Ecosystem	Participation of the department in the ecosystem for innovations and Incubation centres of the institution.					
	Workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices.					
	Number of awards for innovation won by teachers/ research scholars/students during the last five years.					
	Number of start-ups incubated on campus from the department.					
3.4 Research Publications and Awards	Publications follows the stated Code of Ethics and efforts of the department to check malpractices and plagiarism in Research					
	Details about placement, higher education, and entrepreneurs are available?					
	Number of Research Guides in the Department					
	Number of Ph.D.s awarded					
	Number of research papers published in the WOS/Scopus Journals					
	Bibliometrics of the publications during the last five years based on average citation index					
	Number of books and chapters in edited volumes published					
	Number of Patents published/awarded					
3.5 Consultancy	Recognition of teachers who receive state, national and international recognition/awards					
	Institution has a policy on consultancy including revenue sharing between the institution and the faculty					
	Revenue generated from consultancy and corporate training					

3.6 Extension Activities	Participation in extension activities in the neighbourhood community in sensitising students to social issues and holistic development					
	Participation in extension and outreach programs such as Swachh Bharat etc., in collaboration with industry, community and NGOs through NSS/NCC/Red cross/YRC etc.					
	Awards and recognition received for extension activities from Government /recognised bodies					
3.7 Collaboration	Collaborative activities for research, faculty exchange, Student exchange per year					
	Linkages with institutions/industries for internship, on the- job training, project work, sharing of research facilities etc.					
	Functional MoUs with other Institutions, industries, corporate houses etc.					
Observations & Suggestions:						

Criterion 4: Infrastructure and Learning Resources

Key Indicators	Scope of Audit	1	2	3	4	5
4.1 Physical Facilities	Adequacy of facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.					
	Promotion cultural activities and yoga					
	Adequacy of classrooms and seminar halls with ICT – enabled facilities such as smart class, LMS, etc.					
	Department Budget allocation for infrastructure augmentation.					
4.2 Library as a Learning Resource	Library Automated using Integrated Library Management System (ILMS)					
	Availability of remote access to e-resources of the library					
	Percentage per day usage of library by teachers and students of the Department					
4.3 IT Infrastructure	Frequency of updates of IT facilities including Wi-Fi					
	Student - Computer ratio in the department					
	Available bandwidth of internet connection					
Observations & Suggestions:						

Criterion 5: Student Support and Progression

Key Indicators (KIs)	Scope of Audit	1	2	3	4	5
5.1 Student Support	Average percentage of students benefited by scholarships provided by the Government and by the institution					
	Number of capability enhancement schemes such as 1. Guidance for competitive examinations, 2. Career Counselling, 3. Softskill development, 4. Remedial coaching 5. Language lab, 6. Bridge courses etc.,					
5.2 Student Progression	Average percentage of placement of outgoing students					
	Percentage of student progression to higher education and as entrepreneurs (previous graduating batch)					
	Students qualifying in state/ national/ international level examinations during the last five years					
	Evidences of student participation in Professional societies/chapters					
5.3 Student Participation and Activities	Number of awards/medals for outstanding performance in sports/cultural activities at national/international level					
	Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution					
5.4 Alumni Engagement	The Alumni contributes significantly to the development of the Department					
	Frequency of Alumni Association meetings held					

Observations & Suggestions:

Overall Assessment

Strengths of the Department

Weaknesses of the Department


Best practices followed by the Department

Overall Report and Recommendations for Improvement

Signature of the External Expert

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam

Academic Audit Form

Department Information	
Name of the Department	Electrical and Electronics Engineering
No. of Full time permanent Faculty	27
No. of Guest faculty	visiting faculty: 01
Academic Programmes in the Department	UG BS-EEE
	PG M.E. - PED
Student Strength Programwise	UG EEE - 391
	PG PED - 07 (second year)
No. of PhD Students	FT 22
	PT 32
Name, designation and affiliation of the External Expert	Dr. R. Gunabalan Associate Professor School of Electrical Engineering, VIT-Vellore
Signature of the External Expert	 20/9/22
<ul style="list-style-type: none"> The External Expert can grade each parameter with points 1,2,3,4 or 5 based on assessment. Wherever applicable, ratings may be based on the <u>data available for the last three academic years.</u> 	

Criterion 1: Curricular Aspects						
Key Indicators	Scope of Audit	Rating				
		1	2	3	4	5
1.1 Curriculum Design and Development	Curricula developed have relevance to the local/ national / regional/global developmental needs					
	Adequacy of syllabus revision carried out <i>UG-3 PA-4</i>			✓		
	Number of courses having focus on employability/ entrepreneurship/ skill development - <i>not classified</i>					
1.2 Academic Flexibility	Number of new courses introduced to the total number of courses in each program		✓			
	Implementation of Choice Based Credit System (CBCS) / elective courses				✓	
1.3 Curriculum Enrichment	Courses relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics in the Curriculum					✓
	Number of value-added courses imparting transferable and life skills			✓		
	Percentage of Students enrolment in the value-added courses <i>-15%</i>				✓	
	Percentage of students undertaking field projects / internships				✓	
1.4 Feedback System	System of receiving feedback from 1) Students, 2) Teachers, 3) Employers, 4) Alumni 5) Parents, for design and review of syllabus			✓		
	System of Feedback collection, analysis and action taken <i>BoS</i>			✓		
Observations & Suggestions: * Courses to be classified under different category such as employability / skill development etc. * New courses are introduced and not given separate list, reflected in BoS. * Value added courses are less in numbers * Feedback system for design and revision of syllabus is missing.						

Criterion 2: Teaching- Learning and Evaluation

Key Indicators	Scope of Audit	Rating				
		1	2	3	4	5
2.1 Student Enrolment and Profile 30	Percentage of students in the department from other States					
	Demand Ratio for the available seats. - AU course 117					
	Percentage of seats filled as per the applicable reservation policy. Admission Down					
2.2 Catering to Student Diversity 30	Department assesses the learning levels of the students and organises special programs →			✓		
	Evidence of mentoring process and System to ensure motivation of slow learners			✓	✓	
	Student - Full time teacher ratio. 1:18					✓
	Percentage of differently abled students (Divyangjan) on roll.					✓
2.3 Teaching-Learning Process 50	Preparation of course files and adherence to Teaching plans by the faculty members					✓
	Adaptation of Student centric teaching methods, such as experiential learning, participative learning and problem solving methods				✓	
	Use of Learning Management Systems (LMS) and timely availability of COs/ Course Plan/ Lecture Notes/ PPTs etc					✓
	Ratio of students to mentors for academic and stress related issues 1:15					✓
2.4 Teacher Profile and Quality 50	Percentage of full time faculty against sanctioned posts					✓
	Percentage of full time faculty with Ph.D.					✓
	Teaching experience of full time teachers in number of years					✓
	Percentage of teachers received awards, recognition, fellowships at State, National, International level		✓			
	Percentage of full time teachers from other States 2% faculty		✓			
2.5 Evaluation Process and Reforms 50	Department ensures fairness in the evaluation of answer scripts					✓
	Question Paper explores all the elements of Blooms Taxonomy in assessment.					✓
	Evaluation of the performance is in accordance with the course objectives.					✓
	System for student complaints/grievances about evaluation					✓
	Automation of Examination process - COE					✓
2.6 Student Performance and Learning Outcomes 50	POs, PSOs and COs for all Programmes offered by the department are stated and displayed, communicated to teachers and students					✓
	Attainment of program outcomes, program specific outcomes and course outcomes are computed for the different batches.		✓			

	CO-PO attainment is computed and the gap analysis is performed for the courses of the department					
	Availability of semester-wise result analysis for all the batches and average pass percentage					✓
2.7 Student satisfaction Survey	Student satisfaction survey report regarding teaching learning process.					✓

Observations & Suggestions:

Student enrolment & profile is not available in department. It is in Admission section
 Evaluation ^{process} and reforms details are in CoE office

Criterion 3: Research, Innovations and Extension

Key Indicators	Scope of Audit	1	2	3	4	5
3.1 ¹⁰ Promotion of Research and Facilities	Policy for promotion of research within the department.	✓				✓
	Use of SSN internal funding for research.					✓
	Number of teachers awarded international fellowship for advanced studies/research during the last five years. → nil data					
	Central facilities within the department for research → 1		✓			
3.2 ¹⁰ Resource Mobilization for Research	Grants received through research projects sponsored by the government and nongovernment sources. 1, 25 crore / 8 projects				✓	✓
	Percentage of teachers recognised as research guides					✓
	Number of research projects per teacher funded by government and non-government agencies			✓		
3.3 ¹⁰ Innovation Ecosystem	Participation of the department in the ecosystem for innovations and Incubation centres of the institution.			✓		
	Workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia innovative practices.					
	Number of awards for innovation won by teachers/ research scholars/students during the last five years.		✓			
	Number of start-ups incubated on campus from the department. 2+1					
3.4 ³⁰ Research Publications and Awards	Publications follows the stated Code of Ethics and efforts of the department to check malpractices and plagiarism in Research Publication			✓	✓	
	Details about placement, higher education, and entrepreneurs are available?				✓	
	Number of Research Guides in the Department - 25					✓
	Number of Ph.D.s awarded 80					✓
	Number of research papers published in the WOS/Scopus Journals					✓
	Bibliometrics of the publications during the last five years based on average citation index					✓
	Number of books and chapters in edited volumes published					✓
	Number of Patents published/awarded → 7 (minimum)			✓		
3.5 ¹⁰ Consultancy	Recognition of teachers who receive state, national and international recognition/awards		✓			
	Institution has a policy on consultancy including revenue sharing between the institution and the faculty → 20 lakhs			✓		
	Revenue generated from consultancy and corporate training 20 lakhs					

		1	2	3	4	5
3.6 Extension Activities	Participation in extension activities in the neighbourhood community in sensitising students to social issues and holistic development - virtual virtual events			✓		
	Participation in extension and outreach programs such as Swachh Bharat etc., in collaboration with industry, community and NGOs through NSS/NCC/Red cross/YRC etc.			✓	✓	
	Awards and recognition received for extension activities from Government / recognised bodies			✓		
3.7 Collaboration	Collaborative activities for research, faculty exchange, Student exchange per year		✓			
	Linkages with institutions/industries for internship, on the- job training, project work, sharing of research facilities etc.				✓	
	Functional MoUs with other Institutions, industries, corporate houses etc.			✓		
Observations & Suggestions: * central facility is available but not in data format. * Non Govt. funded project is nil. * Funded project / faculty is minimum * Innovation award by faculty is minimum * Approved research policy is required. * " consultancy policy is required * Faculty exchange, student exchange data is needed * MOU activities are minimum						

Criterion 4: Infrastructure and Learning Resources

Key Indicators	Scope of Audit	1	2	3	4	5
4.1 Physical Facilities 30	Adequacy of facilities for teaching – learning, viz., classrooms, laboratories, computing equipment, etc.					✓
	Promotion cultural activities and yoga <i>near - Student affairs central team</i>					
	Adequacy of classrooms and seminar halls with ICT – enabled facilities such as smart class, LMS, etc.					✓
	Department Budget allocation for infrastructure augmentation.					✓
4.2 Library as a Learning Resource 30	Library Automated using Integrated Library Management System (ILMS)					✓
	Availability of remote access to e-resources of the library					✓
	Percentage per day usage of library by teachers and students of the Department <i>Library</i>					
4.3 IT Infrastructure 30	Frequency of updates of IT facilities including Wi-Fi					✓
	Student - Computer ratio in the department				✓	
	Available bandwidth of internet connection <i>20 Mbps</i>					✓

Observations & Suggestions:

Infrastructure facility is Good

4.4 maintenance of campus infrastructure 20

Criterion 5: Student Support and Progression

Key Indicators (KIs)	Scope of Audit	1	2	3	4	5
5.1 Student Support 30	Average percentage of students benefited by scholarships provided by the Government and by the institution				✓	
	Number of capability enhancement schemes such as 1. Guidance for competitive examinations, 2. Career Counselling, 3. Softskill development, 4. Remedial coaching 5. Language lab, 6. Bridge courses etc.,					
5.2 Student Progression 30	Average percentage of placement of outgoing students				✓	
	Percentage of student progression to higher education and as entrepreneurs (previous graduating batch) 16 students					
	Students qualifying in state/ national/ international level examinations during the last five years			✓		
	Evidences of student participation in Professional societies/chapters				✓	
5.3 Student Participation and Activities 30	Number of awards/medals for outstanding performance in sports/cultural activities at national/international level				✓	
	Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution			✓		
5.4 Alumni Engagement 10	The Alumni contributes significantly to the development of the Department				✓	
	Frequency of Alumni Association meetings held				✓	
Observations & Suggestions: * Signed copy is needed for scholarship details * All documents must be recorded.						

Overall Assessment

Strengths of the Department

- * Qualified faculty
- * Good Infrastructure & Research lab
- * 1 Hr/week for Mentoring students

Weaknesses of the Department

- * Less number of consultancy, MoU and funded project
- * PO attainment calculation is not shown.
- * Less no of patent filed and published.
- * Documentation is missing.

Best practices followed by the Department

- * Hands on training to students with the research facility
- * Research funding for faculty and students

Overall Report and Recommendations for Improvement

- * UG students research publications
- * Improvement of consultancy & training, Patent and
- * MoU.
- * Fully ~~auto~~ automated Examination system is needed
- * Hard copy of all documents

Signature of the External Expert

DR. R. Guasalan, Associate Professor, EEE
VIT, Chennai

Sep 21, 2022

From
Dr.N.Venkateswaran,
Professor, Dept. of ECE,
IQAC Coordinator,
SSN College of Engineering, Kalavakkam,
Tamil Nadu, India.

To
The principal,
SSN College of Engineering, Kalavakkam,
Tamil Nadu, India.

Respected Sir,

Sub: Requisition for budget approval towards remuneration for external Audit- Reg.

The external academic audit of each department towards NAAC is scheduled on Friday, 23.09.2022. The details of the invited experts to perform the audit is given below. The remuneration for each external auditor Rs.8000/- is sanctioned and provision is available in the IQAC Budget.

S.No.	Name	Designation	Address
1	Dr M Sasikala	Professor	CEG Campus, Anna University
2	Dr.Mary Anita Rajam V	Professor	Department of CSE CEG Campus, Anna University.
3	Dr. P.K.Jawahar	Professor	B.S.Abdur Rahman Crescent Institute of Science & Technology
4	Dr.Nakeeran	Professor and Head	School of Electronics and Technology, Pondicherry University
5	Dr. Sreenath N	Professor	Pondicherry Engineering College
6	Dr.V.Prasanna Kumari	Professor	Dept of MCA Rajalakshmi Engineering College
7.	Dr. Gunabalan R	Associate Professor	School of Electrical Engineering, VIT University, Chennai
8.	Dr.S. Srinivasan	Professor and Head	Dept, of Instrumentation, Madras Institute of Technology
9.	Dr Sendhilkumar S	Associate Professor	Department of Information Science & Technology CEG, Anna University
10.	Dr. Rajesh Kanna B	Professor	School of Computer Science and Engineering, VIT, Chennai

Hence, I request you to kindly sanction the total amount of **Rs.80,000/-** (Rupees eighty thousand only) towards remuneration.

Thanking You

TO
AFM



Yours faithfully,



N.Venkateswaran,
IQAC - coordinator