

PhD Guided / PhD Awarded during the assessment period while working in the institute (5)

2022-2023

SL. No.	Faculty Name	Designation	Date of joining the institution	Date of Receiving Ph.D.	Year of Supervisor Recognition	Supervisor Recognition Number	No.of PhDs Guided	No.of PhDs Awarded
1	Dr. K. Sathish Kumar	Professor & Head	16-06-2006	23-07-2010	16-07-2011	1950131	4	1
2	Dr. R. Parthiban	Professor	30-10-2015	21-07-2008	13-08-2009	1350088	3	-
3	Dr. P. Senthil Kumar	Professor	31-05-2007	25-11-2011	06-08-2012	1910127	9	2
4	Dr. V. Jaikumar	Associate Professor	01-04-2015	27-07-2009	01-07-2015	2650001	4	-
5	Dr. K. Jagannathan	Associate Professor	18-11-2015	17-07-2007	24-03-20116	2750004	-	-
6	Dr. D. Gnana Prakash	Associate Professor	02-01-2009	28-09-2012	31-05-2013	2150039	6	1
7	Dr.Nalinkanth V Ghone	Associate Professor	01-06-2021	30-06-2008	31-01-2013	2050079	3	-
8	Dr. B. Ambedkar	Associate Professor	23-06-2014	11-07-2011	10-12-2014	2550003	3	1
9	Dr. M. Subramanian	Associate Professor	06-05-2009	23-10-2009	20-03-2016	2350165	-	-
10	Dr. J. Dhanalakshmi	Associate Professor	02-03-2015	04-07-2014	23-12-2015	2650016	2	-
11	Dr. R. Anantharaj	Associate Professor	16-03-2015	08-2011	16-09-2015	2650011	6	-
12	Dr. D. Balaji	Associate Professor	06-06-2015	28-09-2012	21-11-2013	2250019	7	-
13	Dr. B. Chitra	Associate Professor	01-08-2007	03-12-2018	17-11-2020	3650018	-	-

14	Dr.Kilaru Harsha Vardhan	Associate Professor	03-07-2006	21-08-2019			-	-
15	Dr. Pachimatla Rajesh	Assistant Professor	01-06-2021	22-10-2020	14-11-2022		-	-
16	Dr.Anup Kundu	Assistant Professor	01-06-2022	10-07-2019			-	-

## 2021-2022

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2	Dr. R. Parthiban	Professor	30-10-2015	21-07-2008	13-08-2009	1350088	1	3
3	Dr. P. Senthil Kumar	Professor	31-05-2007	25-11-2011	06-08-2012	1910127	10	2
4	Dr. V. Jaikumar	Associate Professor	01-04-2015	27-07-2009	01-07-2015	2650001	2	2
5	Dr. K. Jagannathan	Associate Professor	18-11-2015	17-07-2007	24-03-20116	2750004	-	-
6	Dr. D. Gnana Prakash	Associate Professor	02-01-2009	28-09-2012	31-05-2013	2150039	6	1
7	Dr.Nalinkanth V Ghone	Associate Professor	01-06-2021	30-06-2008	31-01-2013	2050079	3	-
8	Dr. B. Ambedkar	Associate Professor	23-06-2014	11-07-2011	10-12-2014	2550003	4	-
9	Dr.K.P.Gopinath	Associate Professor	16-05-2013	02-01-2012	10-12-2014	2550005	7	2
10	Dr. M. Subramanian	Associate Professor	06-05-2009	23-10-2009	20-03-2016	2350165	-	-
11	Dr. J. Dhanalakshmi	Associate Professor	02-03-2015	04-07-2014	23-12-2015	2650016	2	1

12	Dr. R. Anantharaj	Associate Professor	16-03-2015	08-2011	16-09-2015	2650011	4	2
13	Dr. D. Balaji	Associate Professor	06-06-2015	28-09-2012	21-11-2013	2250019	7	-
14	Dr. B. Chitra	Associate Professor	01-08-2007	03-12-2018	17-11-2020	3650018	-	-
15	Dr.Kilaru Harsha Vardhan	Associate Professor	03-07-2006	21-08-2019			-	-
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### 2020-2021

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7	Dr. B. Ambedkar	Associate Professor	23-06-2014	11-07-2011	10-12-2014	2550003	1	-
8	Dr.K.P.Gopinath	Associate Professor	16-05-2013	02-01-2012	10-12-2014	2550005	7	2
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## 5.8.2 Sponsored Research (20)

### 2020-2021

S.No	Project Title	Duration	Funding Agency	Amount in Rs
1	Electrochemical Sensing of Sulfamethoxazole Antibiotic in Water at GO/ZnO Nanocomposites - Modified Electrodes, Optimization and Real Time Measurement.	3 Years	Department of Science and Technology Technology Mission Division	Rs 63.29 Lacs

### 2019-2020

S.No	Project Title	Duration	Funding Agency	Amount in Rs
1	Development of Sustainable Magnetic Carbon Based Nanocomposite Films from Agro Waste and Evaluate its Application in Removal of Antibiotics from Water	1 Year	The Institution of Engineers (India)	Rs 0.7 Lacs
2	Bench-Scale Design and Development: Investigation of High-Frequency, High-Intensity Ultrasonics for Carbon-Rich Solvent Regeneration in Solvent-Based Post-Combustion CO <sub>2</sub> Capture Process (PCCC) for Reducing CO <sub>2</sub> Capture Energy Demand	3 Years	DST - Mission Innovation Challenge	Rs 208 Lacs

**Cumulative Amount: Rs 271.99 Lacs**

## 5.8.3 Development Activities (15)

- **Research Laboratories**
- **Product Development**
- **Working Models/ Charts/ Monograms etc.**
- **Instructional Materials**

Year	Research Laboratories	Product Development	Working Models/ Charts/ Monograms etc.	Instructional Materials
2020-21	Emerging as Centre of Excellence in Carbon Capture and Utilization	<ul style="list-style-type: none"> <li>▪ Ultra Low Temperature CO<sub>2</sub> Stripping/ Carbon-rich</li> <li>▪ Solvent Regeneration Process</li> <li>▪ Megasonics-assisted Carbon-rich Solvent Regeneration</li> </ul>	Yes	Yes
2019-20	<ul style="list-style-type: none"> <li>▪ Electrochemical Sensor Lab</li> <li>▪ Centre of Excellence in Water Research (CEWAR)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Electrochemical Sensor for the measurement of antibiotics in water</li> <li>▪ Biochar for environmental applications</li> <li>▪ Flotation system for the removal of pollutants</li> <li>▪ Electrodeionization for the removal of toxic pollutants</li> <li>▪ Biosurfactants for toxic pollutant removal</li> <li>▪ Photocatalyst for toxic pollutant removal</li> <li>▪ Pilot scale wastewater treatment units for TOC removal</li> </ul>	Yes	Yes
2018-19	Green Solvent Lab	<ul style="list-style-type: none"> <li>▪ Process Esters</li> <li>▪ Green biodiesel</li> </ul>	Yes	Yes
2017-18	Solvent Development for Clean Technology	<ul style="list-style-type: none"> <li>▪ CO<sub>2</sub> capture using ionic liquids</li> <li>▪ Separation of azeotropic mixtures</li> </ul>	Yes	Yes

#### 5.8.4 – Consultancy (from Industry) (20)

##### 2021-2022

S.No	Project Title	Duration	Funding Agency	Amount in Rs
1	Green Chemical Conversion of Methanol into value added Chemicals	1 Year	Sheenlac Paints Ltd	Rs 22.48 Lacs

##### 2020-2021

S.No	Project Title	Duration	Funding Agency	Amount in Rs
1	Up gradation of domestic and industrial surfactant wash liquids with antiviral agents and analysis of their performance	3 Years	Paramount Industries 2, Parvathipuram, Part 2, Vadaperumbakkam Chennai - 600 060 paramountindustrieschennai@gmail.com	Rs 12 Lacs
2	Treatability studies on the optimization of ozone and carbon dosages for the effective removal of contaminants from secondary treated effluent	3 Months	Larson & Toubro Limited, Construction 979, Mount - Poonamallee Road, Manapakkam - Chennai - 600 089.	Rs 10.10 Lacs
3	Innovation Programme in Entrepreneurship Development and Innovation	1 Year	Hain Biosolutions, M V Rajendra Pandian Avenue, Sembakkam, Chennai - 600073	Rs 2.50 Lacs
4	Conversion of Wood Pulp to Wood Alcohol	6 Months	Sheenlac Paints Ltd	Rs 10.80 Lacs

#### 2019-2020

S.No	Project Title	Duration	Funding Agency	Amount in Rs
1	Waste Plastic Conversion into Liquid Fuels	3 Years	Paterson Energy (P) Ltd, Bhavani Mansion, 3, 4 th Lane, Nungambakkam, Chennai - 600 034.	Rs 3 Lacs

Cumulative Amounts Rs 60.88 Lacs

## **5.9 Faculty Performance Appraisal and Development System (FPADS) (10)**

Faculty members of Higher Educational Institutions today must perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty members need to innovate and conduct research for their self-renewal, keep abreast with changes in technology, and develop expertise for effective implementation of curricula. They are also expected to provide services to the industry and community for understanding and contributing to the solution of real-life problems in industry. Another role relates to the shouldering of administrative responsibilities and co-operation with other Faculty, Heads-of-Departments, and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance.

The assessment is based on:

- A well-defined system for faculty appraisal for all the assessment years (5)
- Its implementation and effectiveness (5)

### **A. System for Faculty Appraisal**

#### **1. Focus on Quality**

Using the medium of an innovative, comprehensive, and flexible education policy, SSN CE attempts to chisel out the total quality person through a persistent focus on imparting quality education. In its pursuit of quality education, SSN CE has an Internal Quality Assurance Cell (IQAC) based on the specific guidelines of the National Assessment and Accreditation Council, an autonomous body set up by the UGC.

SSN CE relentlessly strives towards an institutionalized quality control process through the following quality focused approach: Admission Criteria -> Curriculum Design -> Programme Selection -> Curriculum Implementation -> Evaluation -> Employability.

The Internal Quality Assurance Cell of IQAC was constituted on **01.07.2011**. It is performing following tasks on regular basis:

1. Improvement in quality of teaching and research by regular input to all concerned based on feedback from students.
2. Providing input for best practices in administration for efficient resource utilization and better services to students and staff.
3. Providing inputs for Academic and Administrative Audit and analysis of the results for improvement in areas was found weak.

Students and staff give their feedback and suggestions on teaching and administrative performance by dropping their views in the Suggestion Box located in the Department Library, or through email to the Coordinator of IQAC.

### **B. Assessment of the performance**



## **1. Teaching, learning and evaluation related activities**

Teaching: (Classes taught includes session tutorials, lab, and other teaching related activities): (regular and punctuality to class, remedial teaching, clarifying doubts, counselling and mentoring, additional teaching etc.)

## **2. Examination, Evaluation Activities and Administrative Support & Participation in Students' Research, Co-curricular & Extra-curricular Activities:**

- a) Administrative responsibilities such as Head/ Chairperson / Director/Coordinator etc.
- b) Examination and evaluation duties assigned by the COE or attending the examination paper evaluation.
- c) Student related co-curricular, extension and field-based activities such as students' clubs, career counselling, industrial visits, student's seminars, and other events, cultural, sports, NCC, NSS and community services.
- d) Organizing seminars/conferences/workshops, other institute activities.
- e) Evidence of being actively involved in guiding UG, PG and Ph.D. students.
- f) Conducting sponsored research project by institute, industries, and government funding agencies.
- g) At least one single or joint publication in peer reviewed Journals such as WOS indexed journals and Scopus indexed journals.
- h) Presentation of papers and chairing of sessions at national and international events.
- i) Guiding, carrying out research projects and publishing the research output in peer reviewed Journals like; WOS indexed journals and Scopus indexed journals.

## **C. Implementation and Effectiveness**

The Department of Chemical Engineering has a well-defined system for faculty appraisal for every academic year.

- The Department follows the UGC approved self-appraisal method to evaluate teachers' research and other activities.
- The contents of the self-appraisal are mentioned below:
  - 1) Teaching related activities.
  - 2) Research Related Activities.
  - 3) Activities relating to institution building.
  - 4) Student Feedback.

A well-defined Proforma of self- appraisal report for the faculty is available on the institute web site. It consists of, teaching related activities, research related activities, Activities relating to institution building and Student Feedback. (1) teaching related activities, Teaching Load, Maintenance of Records for both Theory, Lab Courses / Project work Phase I or II, e-learning content development, UG / PG Project Guidance phase 1 / internally funded project, identifying weak students, counselling, and conducting special classes for them after the tests, results in university exams (only theory subjects) in terms of pass %, winning in international / national competitions. (2) Research Related Activities: research guidance (M.S. / PhD.), research output, motivating students to do research, conferences organized, funded projects, consultancy / training (earning revenue). (3) Activities relating to institution building mentoring / counseling, involvement in departmental Activities, Involvement in Institution Building Activity, and (4) Student Feedback. The faculty submits self- appraisal reports for the academic year which are evaluated by the head of the department.

A Performance Index (PI) system has been introduced in the Department of Chemical Engineering to

align teachers' initiatives in teaching, research, and administration areas. PI consisting of a several factors such as guiding Ph.D. students, publications in Web of Science/ Scopus indexed Journals, received internal and external grants, generating MoU with industry with specific outcomes, head of Centre of excellence, incubating / starting a spin-off company, patent, H – Index, Citations.

- In the Performance Index (PI) system, an additional self-appraisal is undertaken for continuous quality enhancement.
- Reviewed by the Head and Principal.
- Teachers are individually apprised of their strengths and weaknesses by their respective Heads and encouraged to achieve higher goals.
- The appraisals also help to assess the merit of the faculty members in applying for the faculty promotions.
- The IQAC regularly monitors and collects the annual self-appraisals in the prescribed format from each Faculty member, duly forwarded by the Head of the Departments and principal.

#### **5.10 Visiting/Adjunct/Emeritus Faculty etc. (10)**

Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc. for all the assessment years:

- Provision of visiting/adjunct faculty (1)
- Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc. (9)  
(Minimum 50 hours interaction in a year will result in 3 marks for that year; 3marks x 3years= 9marks)

**-NIL-**