

SSN College of Engineering (Autonomous)

Rajiv Gandhi Salai, OMR, Kalavakkam, Tamil Nadu - 603110.

WELCOME TO
SRI SIVASUBRAMANIYA NADAR COLLEGE OF ENGINEERING



www.ssn.edu.in



PG ADMISSIONS 2021

M.E. (ENERGY ENGINEERING)

An overview of the PG Programme Offered in the
Department of Mechanical Engineering



BE PROUD TO BE AN ENERGY ENGINEER

SSN College of Engineering (Autonomous)
Rajiv Gandhi Salai, OMR, Kalavakkam, Tamil Nadu - 603110.

Sri Sivasubramaniya Nadar College of Engineering

(An Autonomous Institution - Affiliated to Anna University)

NIRF 2020 RANKING - 44TH IN ENGINEERING STREAM

www.ssn.edu.in



ABOUT SSN



PADMA BHUSHAN Dr. Shiv Nadar
Founder, SSN Institutions



Vision

To be a world-class institution for technical education and scientific research for public good.

Mission

SSN will strive continuously to:

- Make a positive difference to the society through education
- Empower students from across socio-economic strata
- Be a centre of excellence in education in emerging technologies in accordance with the industry and industrial trends
- Build world class research capabilities on par with the finest in the world and broaden students' horizons beyond classroom education
- Nurture talents & entrepreneurship and enable the all-round personality development of students

LEADERSHIP TEAM

BOARD OF MANAGEMENT

- ❖ Dr. Shiv Nadar, Founder and Managing Trustee, SSN Trust
- ❖ Mr. R. Srinivasan, Director and CEO-Redington Ltd, Global Management and Business Leader
- ❖ Ms. Roshni Nadar Malhotra, Trustee, SSN Trust
- ❖ Prof. M. S. Ananth, Former Director, IIT Madras
- ❖ Mr. T. S. Krishnamurthy, Former Chief Election Commissioner of India
- ❖ Mr. P. Sivaprasad, Advocate, Madras High Court, Chennai
- ❖ Mrs. Kala Vijayakumar, President, SSN Institutions
- ❖ Mr. Sriram Rajagopal, Vice President, Human Resources, Cognizant
- ❖ Mr. Subbiah Nagarajan, Senior Advisor, Daimler India Commercial Vehicle

LEADERSHIP TEAM

RESEARCH ADVISORY COUNCIL (RAC)

- ❖ Prof. Raj Reddy, Mozah Bint Nasser Univ Professor, Carnegie Mellon University, USA
- ❖ Prof. R. Natarajan, Former Chairman, AICTE and Former Director, IIT Madras.
- ❖ Prof. N. Balakrishnan, Former Associate Director, IISc Bangalore
- ❖ Dr. Damodar Acharya, Former Chairman, AICTE and Former Director, IIT Kharagpur.

KEY HIGHLIGHTS



- 250 acre state-of-the-art campus ISO certification from 2002
- E-learning initiative: Learner driven knowledge repository on moodle platform enabling students to learn at their own pace
- Healthy “Student Teaching Faculty” ratio. Student strength ~ 4200



- Ranked 44th by NIRF-2020 (Engineering Category).
- Awarded NAAC A+ grade
- Conferred Autonomous status by UGC from year 2018-19.
- NBA accredited Programmes



- Over 400 scholarships worth ~ \$1 million offered each year
- Significant number of first generation learners
- Unique scholarship scheme for rural students

Department of Mechanical Engineering

www.ssn.edu.in

COURSES OFFERED

Programme	Intake
UG	
B.E. (Mech Engg.)	145
	180 (2018-19) 145 from 2020
PG	
M.E. (Manufacturing Engg.)	18
M.E. (Energy Engg.)	18

PG ADMISSIONS 2021

M.E. (ENERGY ENGINEERING)

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ABOUT M.E.(ENERGY ENGINEERING)

Aim

A Masters in Energy Engineering aims at Enriching the Engineering graduates of Mechanical/EEE/Energy/Related backgrounds with the requisite knowledge & Skill sets in Energy and Energy Systems.

Scope & Need of the Course

Today's & Future World needs more and more Engineers qualified in Energy, Power and Materials. Given the growing market of Electric Vehicles, developments happening in Renewable Energy Sectors like Solar, Wind, Biomass etc., Attention to Energy Storage, Conversion, Energy Management & Conservation, Climate Change and so on... Opportunities for Energy Engineers are in Plenty both at National & International Levels. Scope for R&D and Entrepreneurship is Abundant.

BATCHES

M.E. (ENERGY ENGINEERING)



Batch -1 (2015 passed)

Batch - 2 (2016 passed)

Batch - 3 (2017 passed)

Batch - 4 (2018 passed)

Batch - 5 (2019 passed)

Batch - 6 (2020 passed)

Batch - 7 (2021 passed)

Batch - 8 (2022 to pass)

Batch - 9 (2023 to pass)



OUR INFRASTRUCTURE



Engine Testing Facility



Steam Boiler Turbine Unit



Biomass Gasifier



Refrigeration Test Rig



Airconditioning Test Rig

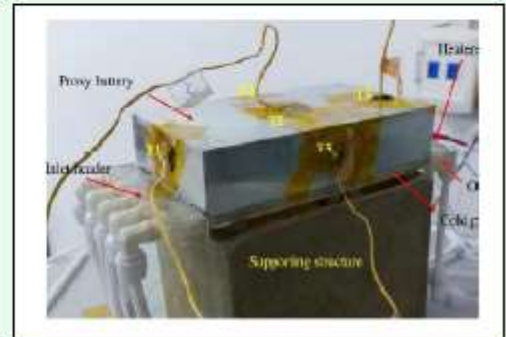


Energy Lab

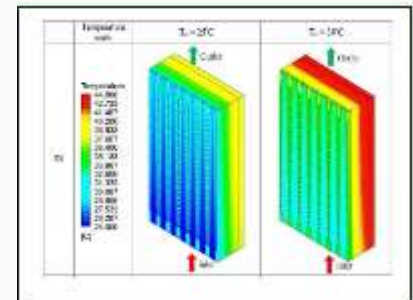
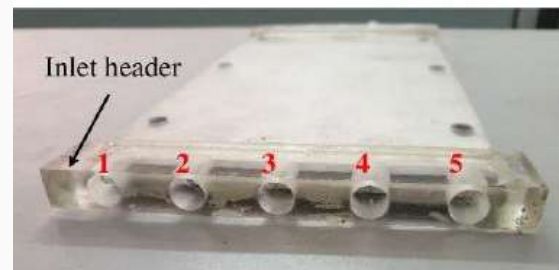
RESEARCH AREAS

Broad Areas of Research

- Energy conservation
- Solar Energy
- Alternate Fuels
- Battery Thermal Management
- Thermal Energy Storage & Management
- Evaporative Cooling
- Refrigeration & Airconditioning
- Computational Fluid Dynamics
- Heat Exchangers
- Emission Control
- Energy Auditing
- Green Buildings & Simulation



Opportunities for Funded Projects, Publications, Conference Presentations and many more...



2018 CURRICULUM (REG 2021 COMING SOON)

CORE SUBJECTS (SEM 1 TO 3)

- Incompressible and Compressible Flows
- Thermodynamic Analysis of Energy Systems
- Energy Conversion Techniques
- Energy Resources
- Advanced Numerical Methods
- Applied Heat Transfer
- Measurement and Control for Energy Systems
- Energy Conservation in Thermal Systems.

Labs: Energy Lab (1st sem) and Simulations Lab (2nd Sem)

ELECTIVE COURSES & PROJECT WORKS

Elective Courses

- Hydrogen and Fuel Cell Technologies
- Solar Energy Technologies
- Wind Energy Technologies
- Bio Energy Conversion Techniques
- Nuclear Engineering
- Computational Fluid Dynamics for Energy Systems
- Energy Systems Modeling and Analysis
- Design of Heat Exchangers
- Electrical Drives and Controls
- Power Generation, Transmission and Utilization
- Hybrid Electric Vehicles
- Design and Analysis of Turbomachines
- Energy Forecasting, Modeling and Project Management

- Energy Efficient Buildings
- Energy Conservation in Electrical Systems
- Nano materials for Energy Applications
- Advanced Power Plant Engineering
- Steam Generator Technology
- Fluidized Bed Systems
- Advanced Energy Storage Technologies
- Waste Management and Energy Recovery
- Environmental Engineering and Pollution Control
- Research Methodology

Project Works

Phase - I (3rd Sem, 3 days/week)

Phase - II (full six months during 4th Sem)

Electives Spread Across 1st to 3rd Semester

PLACEMENTS & INTERNSHIPS

FORD

VESTAS

NIWE

HYUNDAI

ECOLOGIKOL

ZOHO

INFOSYS

THOROGOOD

OGNI ESCO

**TVS
TURBOENERGY**

TCS

EARTHONOMICS

**PREETHI KITCHEN
APPLIANCES**

AND MANY MORE...

ALUMNI (Past & Recent)

Prominent Alumni : Energy Engineering



K.Vignesh
Senior Executive
Thermax Limited,
Chennai



Febi Ponvin
Automation Test Engineer II
ARi global solutions
(Deployed in Caterpillar Inc)



Kumarrathinam K
Mechanical Engineer
Evoqua Water Technologies
India Pvt. Ltd, Chennai



Adithya S
GET
Ford, Chennai



Janani S
Assistant Manager
Hyundai Motor India Ltd,
Irungatukottai, Chennai



Kannan J
Assistant Manager
HI-Tech Arai Ltd
Madurai – 625002.



Sivaram PM
PhD – NIT Trichy
Area : Solar Energy system,
CFD



Tamilselvan P
PhD - School of Energy and
Power Engineering,
Jiangsu University, China.



Kannan V
Engineer, Technical Support
GE T&D India Ltd,
Chennai.



Ruchitha Reddy G,
Engineer, Vestas

Contd...in next slide

ALUMNI (Past & Recent) Contd...



Dheepak R.J.
Engineer, Vestas

AND MANY MORE...

OUR MOU PARTNERS

Our MoU Partners - The Department has signed MoU with several industries to conduct industry relevant R&D and internships for students.



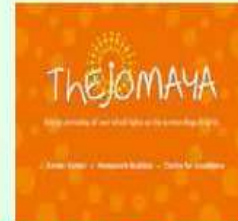
Barola Aero Sports



Ecologikol Advisors India Pvt. Ltd.



Barola Technologies



Thejomaya Educational Services, pvt. Ltd., Chennai



NDT International



Preethi Kitchen Appliances



Mas Robotics & Automation

REG 2021 FOLLOWED FROM THIS YEAR

NEW REGULATIONS REG-2021 IS IN THE PROCESS OF APPROVAL. IT WILL BE IN EFFECT FROM THIS YEAR

FOR A SAMPLE OF COURSES STUDIED REG-2018 (OLD REG) IS GIVEN IN THE NEXT FEW SLIDES

SEMESTERWISE COURSES - OLD REG 2018 (SAMPLE)

SEMESTER I

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	PEY1101	Incompressible and Compressible Flows	FC	5	3	2	0	4
2	PEY1102	Thermodynamic Analysis of Energy Systems	FC	5	3	2	0	4
3	PEY1103	Energy Conversion Techniques	FC	3	3	0	0	3
4	PEY1104	Energy Resources	PC	3	3	0	0	3
5		Professional Elective I	PE	3	3	0	0	3
6		Professional Elective II	PE	3	3	0	0	3
PRACTICAL								
7	PEY1111	Energy Laboratory	PC	4	0	0	4	2
Total				26	18	4	4	22

SEMESTERWISE COURSES - OLD REG 2018 (SAMPLE)

SEMESTER II

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	PMA1276	Advanced Numerical Methods*	FC	5	3	0	2	4
2	PEY1201	Applied Heat Transfer	PC	5	3	2	0	4
3	PEY1202	Measurement and Control for Energy Systems	PC	3	3	0	0	3
4		Professional Elective III	PE	3	3	0	0	3
5		Professional Elective IV	PE	3	3	0	0	3
6		Professional Elective V	PE	3	3	0	0	3
PRACTICAL								
7	PEY1211	Thermal Systems Simulation Laboratory	PC	4	0	0	4	2
Total				26	18	2	6	22

SEMESTERWISE COURSES - OLD REG 2018 (SAMPLE)

SEMESTER III

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	PEY1301	Energy Conservation in Thermal Systems	PC	3	3	0	0	3
2		Professional Elective VI	PE	3	3	0	0	3
3		Professional Elective VII	PE	3	3	0	0	3
PRACTICAL								
4.	PEY1318	Project Work Phase - I	EEC	12	0	0	12	6
TOTAL				21	9	0	12	15

SEMESTERWISE COURSES - OLD REG 2018 (SAMPLE)

SEMESTER IV

Sl. No.	Course code	Course title	Category	Contact periods	L	T	P	C
PRACTICAL								
1	PEY1418	Project Work Phase - II	EEC	24	0	0	24	12
TOTAL				24	0	0	24	12

TOTAL CREDITS TO BE EARNED FOR THE AWARD OF THE DEGREE = 71

SCHOLARSHIPS FOR PG STUDENTS

For GATE candidates (in addition to AICTE stipend):

- ❖ Rs.1,00,000 scholarship for 90 & above percentile
- ❖ Rs.75,000 scholarship for 80 to 89 percentile

Walk-in Walk-out scholarships: 100% scholarships:

- ❖ For university rank holders in B.E/B.Tech

Means Scholarship

- ❖ 50% tuition fee waiver for the selected students with family annual income less than Rs 3 lakh

Rank holders Scholarship

- ❖ 50% tuition fee waiver for the first rank holders of respective B.E / B.Tech colleges

FEE STRUCTURE

Year 2020-21	Type of Admission	Tuition Fees (Rs.)	Hostel Admn. fees (Non- refundable), Hostel & Mess Caution Deposit (Rs.)	Special Fees (Rs.)	Caution Deposit (Rs.)	Hostel Rent (Rs.)	Total (Rs.)
I ME./ M.Tech.	Non Accredited course M.E. Manufacturing Engg.	50,000	20,000	36,000	5,000	82,000	193,000

S.No.	Type of Rooms	Rent Amount (Rs.)
1	Single Room Without attached Toilet	82,000
2	Single Room With attached Toilet	115,000
3	Air conditioned Single room without attached Toilet (Electricity as per actuals will be charged extra)	150,000
4	Air conditioned Single room with attached Toilet (Electricity as per actuals will be charged extra)	175,000

M.E. (ENERGY ENGG.) AT SSNCE MEANS...



Qualified Faculty



Quality Research



Great Learning



Funded Projects



Publications



Higher Studies & Placement Opportunities

CONTACT FOR FURTHER INFO

Dr. S.R. Koteswara Rao
Professor & Head
Dept. of Mechanical Engineering
SSNCE.
Email: koteswararaosr@ssn.edu.in
+91-44-27469700-233

Dr. N. Lakshmi Narasimhan,
Associate Professor
Dept. of Mechanical Engineering
SSNCE.
Email: laskhminarasimhann@ssn.edu.in
+91-44-27469700-234

BE PROUD TO BE AN ENERGY ENGINEER !!

Thank You

www.ssn.edu.in

See You at SSN !!