



You Choose, We Do It

St. JOSEPH'S COLLEGE OF ENGINEERING

St. JOSEPH'S GROUP OF INSTITUTIONS

OMR, Chennai - 119

JETCHEM ENGINEERS

**Green
Engineering**



turning
ideas
into
reality

DEPARTMENT OF CHEMICAL ENGINEERING

DEPARTMENT ACTIVITIES FROM

1st JUNE 2016 TO 31st MAY 2017

Volume : 32

Messages...

Dr. B. Babu Manoharan M.A., M.B.A, Ph. D.

Chairman & Managing Director.

“**JET CHEM ENGINEERS**”, the technical magazine of Chemical Engineering students is a reflection of the activism they possess. It is heartening to know that they are bringing out their 32nd Volume that has its focus on “**GREEN ENGINEERING**”. I extend hearty congratulations to them

Mrs . B. Jessie Priya M.Com.

Director

I would like to express my gratitude to the students and staff members of Chemical Engineering department for their effort in releasing the magazine “**GREEN ENGINEERING**”- Volume 32

Mr. B. Shashi Sekar M.Sc.

Director

I take immense pleasure to congratulate the students and staff members of Chemical Engineering department for their effort in releasing the magazine “**GREEN ENGINEERING**”- Volume 32

Dr. Vaddi Seshagiri Rao, M.E.,M.B.A,Ph.D.

Principal, St.Joseph’s College of Engineering.

The 32nd Volume of “**JET CHEM ENGINEERS**” being released by the students of Chemical Engineering deserves appreciation for its focus on “**GREEN ENGINEERING**”. I extend hearty congratulations to them

MESSAGE FROM EDITORIAL BOARD

“**GREEN ENGINEERING**” is the topic around which the 32nd Volume of **JET CHEM ENGINEERS** is woven. The Green engineering is the development and commercialization of industrial processes that are economically feasible and reduce the risk to human health and environment. We are very grateful to our beloved **Chairman & Managing Director Dr. B. Babu Manoharan M.A., M.B.A, Ph.D., Directors Mrs. B. Jessie Priya M.Com & Mr. B. Shashi Sekar M.Sc, Principal Dr. Vaddi Seshagiri Rao, M.E., M.B.A, Ph.D** for their constant encouragement and their keen interest towards the Department activities.

-The Editorial Board

Editorial Advisors:

Dr.R.Baskaran

Professor and HOD (Staff & Lab affairs)

Dr.N.Venkatesh

Professor and HOD (Student’s affairs)

Editorial Board:

Ms. N. Deepa, Asst Professor

Mr. Aakash. V. R, III Year

Mr. Raghavendar.S, III Year

Mr. Sriganesh Parameswaran, III year

CHEMICAL DEPARTMENT – ANNA UNIVERSITY RANK HOLDERS – 2016



Mr.ARAVIND.G
S/O, Mr.Gopi.K.R
Mrs.Indira.G
4th Rank, CGPA: 9.35
Cash Prize: Rs.25,000



Mr.VENKATESH.D
S/O, Mr.Devanathan.N.K
Mrs.Sivakala.G.D
7th Rank, CGPA:9.19
Cash Prize: Rs.25,000



Ms.DEEPIKA.R
D/O,Mr.Raghuraman.B
Mrs.Asha.R
8th Rank, CGPA:9.15
Cash Prize: Rs.25,000



Ms.SANDANA.V.P
D/O, Prabhakaran.V
Mrs.Bharathi
10th Rank, CGPA:9.12
Cash Prize: Rs.25,000



Mr.RAJA RAJA CHOZAN.P
S/O, Ponnambalam.N
Mrs.Kalpana.P
12th RANK, CGPA:9.05
Cash Prize: Rs.25,000



Mr.ARUNACHALAM.S
S/O,Mr.Subramanian.K.S
Mrs.Sathya.P.S
13th RANK, CGPA:9.03
Cash Prize: Rs.25,000



Ms.MAHESWARI.C
D/O,Mr.Chandrasekaran.R
Mrs.Manimegalai.C
20th RANK, CGPA: 8.83
Cash Prize: Rs.25,000

VISION OF THE DEPARTMENT

- To provide knowledge centered education that continually responds to changing realities in the field of Chemical Engineering.

MISSION OF THE DEPARTMENT

- To establish academic integrity so as to inculcate the professional skills to compete in global environments.
- To enrich the Chemical Engineering knowledge through research & innovation.
- To hone the skills of students to succeed in Chemical Industry.



St. Joseph's College of Engineering

19th Graduation Day Report

*The 19th Graduation Day
is conducted on 9th of July 2017.*

*Dr. B. Babu Manoharan, Chairman and Managing Director,
Mrs. B. Jessie Priya & Mr. B. Shashi Sekar, Directors,
St. Joseph's Group of Institutions, will preside over the function.
Mr. J. Sujith Kumar - HR Business Leader - Infosys Ltd. &
Founder - Maatram Foundation will deliver the graduation address
and confer the degrees to **1357** new graduates.*

*The College has bagged the Highest number of University Ranks
a total of **117** ranks for the **11th** consecutive year in Anna University
Examinations held during May 2016.*

*All the Rank holders will be appreciated and lauded by Cash Prizes,
a total worth of **Rs. 30.75 lakhs** which includes
Rs. 50,000/- each for the Gold Medal and
Silver Medal and **Rs. 25,000/-** each for all other Rank Holders.
The total prize money values up to **Rs. 33.67 lakhs.***



PLACEMENT DETAILS

Out of 1357 students who are going to receive their degree, 1237 of them are placed through campus interviews, 76 of them got placed through off campus and 51 of them have chosen to be an entrepreneur. The students are recruited by many leading organizations like Cognizant Technologies, Wipro, Infosys, Mu-Sigma, Comm Vault, Global Analytics, Vembo Technologies, Tech Mahindra Soliton Technologies, HDFC, ICICI, Yes Bank, ITC Ltd, L&T, Zoho, Naukri.com, HCL, Hewitt, Renault Nissan, Virtusa, RBS, Accenture, Mindtree, Kotak Mahindra Bank, Pepsico etc., with a salary ranging from 2.5 lakhs to Rs 10.05 lakhs per annum.

HIGHER STUDIES

187 Students are pursuing their higher studies at various Universities in India as well as abroad. Students have got admission into top ranking Universities like University of Texas, Stanford University, Carnegie Mellon University, University of Massachusetts, Arizona State University, North Carolina State University, National University of Singapore, Illinois Institute of Technology, NJIT, University of West Virginia, Leeds University (UK), North Carolina State University, IITs, IIMs, NITs etc, through our Advisory Bureau for Higher Studies (ABHS).

BEST OUTGOING STUDENTS

Sl. No	Dept.	Name of the Student
1	CSE	R. ABHILASH
2		N.B. SOUNDARYA
3	ECE	D. ALLEN PAUL
4		R. NANDINI
5	EEE	S. VENKATA SUBRAMANIAN
6		S.S. SHANU
7	IT	G. KANTHIVEL
8		R. ABINAYA
9	CHEMICAL	G. ARAVIND

Sl. No	Dept.	Name of the Student
10	BIO	M. ABHINAYA
11	ICE	R. KAVIYA
12	EIE	M.N. MATHEWS EMMANUEL SORIS
13		Y. NIKITA
14	MECH	R. KARTHIK
15	MCA	M. RAVICHANDRAN
16	MSC - CT	G. SIVARANJANI
17	MBA	A. SINGARAM
18		D. KEERTHANA



Cognizant

Best Outgoing Student Award Winner 2015-16

ABINAYA R

Dept. of IT

CO-CURRICULAR ACTIVITIES

- Ms. Niketha of Electronics and Instrumentation Department carried out the project "Breast thermal imagery" and presented it in an International Conference at Interscience Institute of Management and Technology, Bhuvaneshwar which has been published in ELSIEVER.
- Abinaya R, of IT Dept received the Best Outgoing Student Award from Cognizant Technology Solutions (CTS) for her outstanding performance.
- Jeffrey Jossanae M, of IT dept was selected for an internship in IIT Bombay and is currently working on the Government project "Demonstration and Development of Rural ICT" for Digital India, under the guidance of Professor Ganesh Ramakrishnan, IIT Bombay funded by NABARD, Microsoft Student Research and IIT Bombay.
- Shaheen Qadir, of IT dept was selected as the Google Student Ambassador by Google. She headed the Google Student Club that is a part of the Google Student Ambassador Program, hosted by Google across the globe.
- A team of students from the Mechanical Engineering Department Designed the racing car and participated in an international competition "SUPRA" and won the first place; 1st among the teams from Chennai, 3rd among the teams from Tamilnadu and 30th position at the all India level.

EXTRA CURRICULAR ACTIVITIES

Our students have excelled not only in the field of academics, but also in the field of sports. We have

M. Mohammed Nisan, S. Narasimha Priya, P. Ganesh, S. Aravindhan, P. Anjuka, S.P.B. Poorvika, A. Nalini, R. Girija, S. Nithya, M. Sri Yazhiniyal, Anupama Johnson, J. Roni Christina & S. Ilayaraja who represented our college in various events at the National and International Levels.



STUDENT DETAILS

No of Students

No of students Appeared	:	1481
No. of students Passed	:	1357
Pass Percentage	:	91.63
First Class with Distinction	:	143
Passed with First Class	:	1240

Ranks bagged by the college right from its inception (From May 1998 University Examinations)

Total No. of Ranks	:	1119
Gold Medals	:	50
Silver Medals	:	43
Other Ranks	:	1026

Anna University Ranks

for the 11 th consecutive year		
Total No. of University Ranks	:	120

Awards

University Rank Awards	:	33.67 lakhs
Gold Medal Cash Awards (6*50,000)	:	3.00 lakhs
Cash Award (111*25,000)	:	27.75 lakhs
Shields & Medals	:	2.92 lakhs

Placement

Total No. of Students Placed through Campus Recruitment	:	1237
Off Campus	:	76
Self Employed	:	51

Higher Studies

Students pursuing Higher studies through Advisory Bureau for Higher Studies (ABHS)		
Abroad	:	105
India	:	67

Sports

International Players	:	2
National Players	:	11
Represented Anna University in All India University Tournaments	:	31

**The trust has constituted awards to all the topper in each branch.
The awardees of the trust award are**

S.No.	Name of the Award	Branch	Year	Name of the Student
1	Dr. M.G.R Award	CSE	2012-2016	Ms. Soundarya N.B
2	A.P. Baulraj Award	ECE	2012-2016	Ms. Nandini .R
3	Abraham Lincoln Award	EEE	2012-2016	Ms. Mohanapriya S
4	Mother Teresa Award	MECHANICAL	2012-2016	Mr. Vinoth M
5	Dr. A.P.J. Abdul Kalam Award	ICE	2012-2016	Ms. Riswana Farveen M
6	Kalpana Chawla Award	EIE	2012-2016	Mr. Shri Rajasekar R
7	Martin Luther King Award	IT	2012-2016	Ms. Abinaya R
8	Deiva Pulavar Thiruvalluvar Award	CHEMICAL	2012-2016	Mr. Aravind G
9	M. Visvesvaraya Award	Biotechnology	2012-2016	Ms. Sanjana S
10	Mahakavi Subramaniya Bharathiar Award	M.B.A	2014-2016	Ms. Akanksha Sisodiya
11	Pavendar Bharathidasan Award	M.C.A.	2013-2016	Ms. Manjula K
12	Dr. S. Radhakrishnan Award	M. Sc.	2010-2015	Ms. Sivaranjani .G
13	Annai Janaki M.G.R Award	M.E (Applied Electronics)	2014-2016	Ms. Dorothy R
14	Perunthalaivar Kamarajar Award	M.E (Power Electronics)	2014-2016	Ms. Dhaniyalakshmi T
15	Arignar Anna Award	M.E (Computer Science)	2014-2016	Ms. Sri Heera S
16	Nelson Mandela Award	M.E (C & I)	2014-2016	Ms. Indhumathi R
17	Sir C. V. Raman Award	M.E (Power Systems)	2014-2016	Ms. Lakshmi M
18	Srinivasa Ramanujan Award	M.E (Software Engineering)	2014-2016	Ms. Anitha Josephine A
19	C.K Prahalad Award	M.E (Manufacturing Engg.)	2014-2016	Ms. Lavanya V
20	Dr. Muthulakshmi Award	M.Tech (Biotechnology)	2014-2016	Ms. Chitrakala S

Achievements of our students year after year

Year of passing	UNIVERSITY RESULTS			PLACEMENT			ABHS		ANNA UNIVERSITY RANKS			
	Total No of Students	No of Students Passed	% Of Pass	Through Campus Interview	Off Campus Interview	Self Employed Own Business	Abroad	India	Total no of university Ranks	Gold Medals	Silver Medals	Other Ranks
2006	902	817	90.5	469	176	33	98	41	62	3	2	57
2007	984	892	90.6	609	144	29	76	34	45	1	2	42
2008	1014	923	91.2	810	31	23	38	21	45	3	4	38
2009	1227	1134	92.4	681	267	33	97	56	59	6	2	51
2010	1273	1183	92.9	705	298	62	88	30	59	3	3	53
2011	1380	1265	91.7	864	218	60	97	26	84	5	4	75
2012	1365	1229	90.1	901	176	70	92	39	123	2	3	118
2013	1368	1243	90.9	686	161	58	112	51	112	1	1	110
2014	1485	1329	89.7	697	184	71	129	58	107	4	1	102
2015	1471	1315	89.4	910	227	174	133	59	106	-	-	106
2016	1481	1357	91.6	1237	76	51	112	75	120	6	5	106
2017	----	----	----	*1472	----	---	---	---	---	---	---	---

* as on May 2017

The Management, Principal and Staff extended a hearty congratulation to all the above students and all the budding graduates for their academic and extra curricular achievements.

DEPARTMENT OF CHEMICAL ENGINEERING

UNIVERSITY RESULTS	Total No of students graduated	74
	No of students graduated in First class with distinction	17
	No of students graduated in First class	46
PLACEMENT	Through Campus Interview	43
	Off Campus Interview	05
	Self Employed Own Business	01
HIGHER STUDIES	Abroad	06
	India	03
ANNA UNIVERSITY RANKS	Total no of university Ranks	07
	Ranks	1. Mr. ARAVIND.G Rank: 4 CGPA: 9.35 2. Mr. VENKATESH.D Rank: 7 CGPA: 9.19 3. Ms. DEEPIKA.R Rank: 8 CGPA: 9.15 4. Ms. SANDANA.V.P Rank: 10 CGPA: 9.12 5. Mr. RAJA RAJA CHOZAN.P Rank: 12 CGPA: 9.05 6. Mr. ARUNACHALAM. S Rank: 13 CGPA: 9.03 7. Ms. MAHESWARI. C Rank: 20 CGPA: 8.83
Pass Percentage		86.48 %
Recipient of Trust Award		Mr. ARAVIND.G (Deiva Pulavar Thiruvalluvar Award)

STAFF ACTIVITIES

❖ Dr. R. BASKARAN

- A paper entitled “**Adsorption studies of hexavalent chromium using syzygium cumini bark**” published in Journal of Chemical and Pharmaceutical Sciences”,3,2016,1442-1446
- A paper entitled “**Adsorption of Chromium from Aqueous Solution Using Tamarindus indica Leaves**” published in Journal of Environmental Biology, 4,37,2016.
- A paper entitled “**Adsorption of Hexavalent Chromium in Industrial Water Using Pithecellobium Dulce Bark**” published in Research Journal of Pharmaceutical, Biological and Chemical Sciences, 8,1, 2017,1450-1456
- A paper entitled “**Effect of temperature on thermo physical properties of binary liquid mixture and its Effect on Environment**” published in International Journal of Advanced Research, 4, 9, 2016
- A paper entitled “**Experimental Studies on Thermo Physical Properties and Spontaneity of Organic Compound Waste and Its Effect on Environment**” published in Research Journal of Pharmaceutical, Biological and Chemical Sciences, 7, 6, 2016,2393-2398
- A paper entitled “**Removal of high concentrations of chromium from aqueous solutions using leaves of Tamarindus indica: Kinetics and equilibrium studies**” published in Journal of Environmental Biology,6,37,2016,1443
- A paper entitled “**Thermo physical properties of organic compounds and its impact on environment**” published in Journal of Environmental Biology,37,2016,1457-1461

❖ Dr. N. VENKATESH

- Attended Conference on “**Application of emulsions, foams and colloidal dispersions**” Organized by IIT Madras held during 23rd to 28th, January 2017
- Attended a Faculty Development Programme on “**Conceptual mechanism of transport operations in Chemical and Biochemical process**” Organized by NIT Trichy from 22nd to 27th August 2016

MOU SIGNED

Chemical department has signed a formal agreement, Memorandum Of Understanding (MOU) with Meera Laboratories. Shri Meera Labs Pvt Ltd is one of the leading manufacturer of facility chemicals in Chennai , catering to the various needs of industries. It supplies various chemicals to leather, textile, paint, printing ink and agriculture industry.

ONE DAY NATIONAL WORKSHOP ON “EMERGING TECHNOLOGIES IN CHEMICAL ENGINEERING”

A Workshop titled “Emerging technology in Chemical Engineering” was organized on 09.09.2016 in the Department of Chemical Engineering at St. Joseph’s College of Engineering, in association with IICHE. This workshop was planned to introduce budding researchers in chemical engineering to the emerging research areas in chemical engineering science. The workshop consisted of overview lectures on

- Recent technology on renewable energyresources
- Recent Technology in Chemical Engineering

The following eminent personalities delivered the lecture,

1. **Dr.Durga Jeevitha**, Former Principal, Vins Christian College of Engineering, have delivered a plenary lecture on “Latest technology on renewable energyresources”.
2. **Dr. Nagarajan**, IIT Chennai, have delivered a plenary lecture on “Latest Technology in Chemical Engineering”

The participants thoroughly enjoyed exposure to the frontier areas of research in chemical engineering. During the feedback session at the end of the workshop, a large section of participants indicated that they have seriously started thinking of pursuing a career in research.

LIST OF STUDENTS (2012 – 2016 BATCH) RECEIVED THE OFFER LETTER FOR HIGHER STUDIES

ADVISORY BUREAU FOR HIGHER STUDIES

The advisory Bureau for higher studies (ABHS) is functioning as a separate wing with the prime notion to serve the student community for getting higher studies admission in India and abroad. The main objective of ABHS is to enable the students to prepare for the tests like GRE, TOEFL, GMAT, IELTS, GATE, CAT etc. ABHS has the latest information, books and CD is regarding GRE, TOEFL, GMAT, IELTS, GATE and CAT. For the benefit of the Hostel students, coaching classes for the qualifying exams like GRE, TOEFL, GATE and CAT have been arranged in thecampus.

ABHS also organizes guest lectures and resource persons from IDP, USIEF, Cambridge University, British Council and other higher studies agencies, handle seminars to equip the students for pursuing higher studies in India and abroad. Various Workshops and seminars. Apart from this, the students are exposed to the firsthand information from Associate Director, Deans, Department heads and faculties from many educational institutes like University of California,

University of Pennsylvania Graduate School of Education, Swinburne University, University of Sussex, Illinois Institute of Technology, Rochester Institute of Technology, SUNY and Southern Illinois University. The Academicians have visited our campus and briefed the students about the application process, scholarships and requirements in their respective universities.

Our students have admission into various top ranking universities in different countries like USA, Australia, UK, New Zealand, Canada, Germany, Sweden and Singapore. To name a few, University of Texas, Stanford university, NJIT, Carnegie Mellon university, University of Massachusetts, Arizona State University, North Carolina state University, Illinois Institute of technology, University of Pennsylvania, Leeds University, University of Birmingham, NUS, NTU, University of West Virginia, MRIT, University of MTU, McGill University etc. The number of students who have admission for higher studies during recent years is as follows:

S.No	Academic Year	No of students*
1.	2016 - 2017	61**
2.	2015 - 2016	187
3.	2014 - 2015	192
4.	2013 - 2014	187
5.	2012 – 2013	163
6.	2011 – 2012	131
7.	2010 – 2011	123

****This is the number of students who have gone for higher education immediately after the completion of their course.***

***** The admission process is still going on..***

Apart from this, many students are pursuing higher studies in India like NITs, IITs, IIMs, and IIPM.

In the department of Chemical Engineering

S.NO	NAME OF THE STUDENT	COURSE	INSTITUTE
1.	Arunachalam.S	MS	Lehigh University
2.	Deepika.R	MS	University of Southern California
3.	Maheswari.C	MS	University of Illinois, Chicago
4.	Prasanth.C	MS	University of Illinois, Chicago
5.	Pravin Bosco.C	MS	University of South Carolina
6.	Shriram.R	MS	University of Florida
7.	Roshan.P.R	M.Tech	University of Petroleum and Energy Studies
8.	Nithya Sivagami.G	M.Tech	AC Tech, Anna University
9.	Jeniha Christy	MBA	SSN School of Management
10.	Swetha Bhat	Ph.D	BITS Pilani,Goa

The Business English Certificate (BEC), a certification from Cambridge University is a qualification in English for work. It is given under three levels - Preliminary, Vantage and Higher. All the second year students are given BEC training for a week and then they take the BEC examination, conducted by the Cambridge University in our campus itself. For the past five years, our college is getting best preparatory center by the Cambridge University.

PLACEMENT ORIENTATION PROGRAMME

Placement Orientation Program & other activities



The Centre for Training and Placement has conducted Aptitude crash course for second year students by Vista Mind. Aptitude crash course was conducted in two phases, first phase in the third semester & second phase in the fourth

semester. Placement orientation program-II (POP II) was conducted for the final year students by Vista Mind and trained them on soft skills, quantitative aptitude skills etc., to prepare them for placement recruitments. Also POP III, a company specific training programme was conducted by SMART to crack Cognizant, Infosys, Wipro test pattern.

The Centre for Training & Placement conducted Online aptitude assessment tests on every week for all the students through the skill rack portal.

COMMUNICATION SKILL ENHANCEMENT PROGRAM

Centre for Training and Placement of St Joseph's is largely responsible and committed towards the identification and catering to the need of training of students so that they are able to develop a good



personality; and assist them to find right job and help them place in right companies before they pass out. We realize that in order to convert a raw student in to employable graduate, several behavioral attributes need to be addressed in addition to the development of technical skills. Some of the behavioral attributes are good communication skills, developing positive attitude towards work, and understanding of moral and ethical

values.

Every academic year, our college has taken an initiative to improve the communication skill of the students by organizing 48 hrs Communication skill enhancement program. The aim of this program is to empower our students to take up the future campus recruitment with confidence. The expert committee evaluates all the first year students for communication skill. Based on the evaluation students are categorized into **three levels** and students are given appropriate training. This communication enhancement program is conducted by corporate trainers from **Strides, Winspire, Vistamind etc.**

CONQUISTA 2017

DISTRIBUTION OF 1357 PLACEMENT ORDERS TO THE PLACED STUDENTS

CONQUISTA'17 – The word that makes us well with pride of our achievement. CONQUISTA is the ceremony of issuing the offer letters to the students recruited through campus placement. It was held on April 8, 2017 with grandeur.

The function was presided by Mr. Singaravelu, Senior Vice President from Cognizant and Mr. Suryanarayanan, Associate Vice President, Infosys Limited who handed over the offer letters to the students in the presence of Dr.B.Babu Manoharan, Chairman & Managing Director, Mrs.B.Jessie Priya & Mr.B.Shashi Sekar, Directors and Dr.Vaddi Seshagiri Rao & Dr.P.Ravichandran, Principals of St Joseph's group of Institutions. Human resources - Campus Hiring from Cognizant and Infosys were also present as 'special invitees'.

We are proud to inform that we have achieved a placement record of 1472 so far in this year. It is indeed a golden feather in the cap of St. Joseph's Group of Institutions.



PLACEMENT DETAILS OF FINAL YEAR STUDENTS (2016-2017)

We are glad to inform that Students are selected through campus recruitment processes for the year 2015 - 16 with an annual salary package, starting from **Rs 2.4 Lakhs to 10.18 Lakhs** for UG & PG students.

No of Individual Offers : 1472

St. JOSEPH'S COLLEGE OF ENGINEERING : 1113

St. JOSEPH'S INSTITUTE OF TECHNOLOGY : 359

S. No	College	Dept	Total	S. No	College	Dept	Total
1.	St. Joseph's College of Engineering	CSE	173	11.	St. Joseph's College of Engineering	MBA	110
2.		IT	89	12.		ME - Applied Electronics	9
3.		ECE	164	13.		ME - Power Systems	7
4.		EEE	89	14.		ME - Power Electronics	5
5.		EIE	136	15.		ME - Control & Instrumentation	4
6.		MECH	137	16.		ME - Computer Science	12
7.		ICE	39	17.		ME - Software Engineering	3
8.		BIO TECH	48	18.		M. Tech - Bio Tech	3
9.		CHEMICAL	41	19.		ME - Manufacturing	2
10.		MCA	38	20.			

S. No	College	Dept	Total
1.	St. Joseph's Institute of Technology	CSE	84
2.		IT	43
3.		ECE	79
4.		EEE	84
5.		MECH	69

PLACEMENT DETAILS OF CHEMICAL ENGINEERING STUDENTS (2016 – 2017)

The Management and faculty of Chemical Engineering Department congratulate the following students for getting placed in reputed companies through campus interviews. We wish them all the very best for their future endeavor.

NAME OF THE STUDENT	COMPANY NAME	NAME OF THE STUDENT	COMPANY NAME
ALICE SNEHA GEORGE		ANTO FELIX SOTVIK G S	
AMRUTHA. C		ARUN KUMAR R	
ANTO FELIX SOTVIK G S		CHERYL PEREIRA	
ARAVIND M		J.GUNA TWEENA BENIZ	
BALAJI .T. P		JAYASHREE Y	
CHERYL PEREIRA		MADHUMATHI S	
GUNA TWEENA BENIZ.J		NIVEDITHA J R	
JAYASHREE Y		PATTABIRAMAN V K	
JITHIN RAJ K		PAVITHRA GABRIEL	
KAVI NILA G		VEENA MATHANGI G	
KAVIPRIYA G		JAYASHREE Y	
MADHUMATHI S		KAVIPRIYA G	
MAHIMA H		NIVEDITA JR	
MOHANRAJ E		RAZIKA SUBHANA A	
NIVEDITHA J R		ALLAN ROY	
PAVITHRA GABRIEL	SNEHAA E		
RAZIKA SUBHANA A	ANTO FELIX SOTVIK G S		
ROHINI N S	JITHIN RAJ K		
SNEHAA E	SASITHARAN M		
SATHISH K	SUGUMAR R		
ARUN KUMAR R	VEENA MATHANGI		
KAVI NILA G			
RAZIKA SUBHANA A			

Centre for Training & Placement Placement Training Detailed Schedule

II Year

Dates	British English Certification	Aptitude Crash Course	Ebox Training	
			Engineering	Technology
June 12th - 14th	Technology (All Branches)	Engineering (CSE, IT, ECE, CHEM, CIVIL)	ICE	
June 15th - 17th		Engineering (EEE, EIE, MECH, ICE, BIO TECH)	CIVIL	
June 19th - 21st	Engineering (ECE,IT,MECH,CIVIL,CH EM, BIO TECH)		EEE	EEE
June 22nd - 24th			EIE	MECH
June 27th - 29th	Engineering (EIE,EEE,CSE,ICE)		CHEMICAL	
June 30th - July 3rd				
June 28th - 30th		Technology (All Branches)		
July 10th - 12th			MECH	
July 13th - 15th			BIO TECH	

III Year

Activity	Duration	Dates
Department Specific Value Added Course (Department Initiative)	6 Days	Slot 1 - June 12th - June 17th Slot 2 - June 19th - June 24th Slot 3 - June 27th - July 3rd

VII Semester Placement Training Schedule (2017 – 18)

SEMESTER	ACTIVITY	ELIGIBILITY	TRAINING PARTNER	DURATION (In Days)	DATES
VII	Data structures & Algorithm (College Sponsored) (Training & Virtual Learning)	ALL Departments (Selected Students Only)	E BOX	10	June 7th - June 17th
	JAVA & SQL (Training & Virtual Learning)	ALL Departments (For Registered Students)	E BOX	8	July 10th - July 18th
	Department Orientation	ALL Departments	-	-	June 28th
	Submission of Phase I Project Report & Viva Voce	ALL Departments	-	-	July 21st
VII Total package worth Rs. 5000	Placement Orientation Program II	UPTO 2 ARREARS	Vista Mind	6	June 19th - June 24th
	CoCubes Online Assessment I		CoCubes	3 hrs	June 29th & June 30th
	Guvi Online Learning Portal		Guvi	Learning Platform (Only for MCA & ME)	From June Onwards
	Mock Interview I		External Partner		June 29th, 30th & July 1st
	AMCAT - II		Aspiring Minds	1	July 31st & August 1st
	Mock Interview II		External Partner		August 5th & 19th
	CoCubes Online Assessment II		CoCubes		August 4th & 5th
	Cognizant - CCSP		Cognizant	1	August 16th & 17th (Tentative Dates)
	Cognizant - Mock interview		Cognizant	1	July / August
	Placement Orientation Program III		SMART Training Resource	6	August 7th - August 12th
	IT Refresher		Top Fresher	2	August 28th - August 31st

2017-2018 Placement Circular

We are glad to inform you that the following students got selected in various Core / Product Companies through Campus placement as on July 17th 2017.

Sl.No	Name of the Candidate	Branch	College	Company
1	Tharun Sundar B	EIE	Engineering	Soliton
2	Pranishaa	ECE	Engineering	
3	Rachen R	EEE	Engineering	
4	Adeline Grace G	EEE	Technology	
5	SAHANA R	CSE	Engineering	Amphisoft
6	SUNIL JOSE	CSE	Engineering	
7	ARAVINTH S	IT	Engineering	
8	SHARON JACOB	ECE	Engineering	
9	KUMARAGURU G	IT	Technology	
10	SUBHA LAKSHMI R S	IT	Engineering	E-CON Systems
11	RAGHUL V	EEE	Engineering	
12	JOSEPH LIONEL FABER	IT	Technology	

The following list of companies will be visiting our college for the campus placement in the month of July 2017.

Company	Campus Date
Sirius	July 19 th
Elitists	July 20 th
Thought works	Last week of July
Amazon	Last week of July

We are having many forthcoming recruitment by reputed industries in following months and we are training our students in a structured way.

DEPARTMENT TOPPERS

A right honor at the right time will have an impact on life forever. The students who have catalyzed their actions into accomplishments by achieving good grades in the University Exam are motivated by the management in different ways by

- ❖ **Anna university rank holders will be awarded Rs.25, 000/- each and for gold medal Rs.50,000/- on our college Graduation Day.**
- ❖ Awarding University Rank Holders with Shields on Graduation Day.
- ❖ Honoring the First University Topper from each Department with a special shield incorporating the name of a famous Personality.
- ❖ Issuing extra book bank library cards for semester toppers to enhance learning skills and better understanding.
- ❖ Awarding merit certificates at the end of each semester for subject toppers as well as overall toppers.
- ❖ Hosting Special lunch for the semester toppers on that day.

DEPARTMENT TOPPER'S – ABOVE 8.3 CGPA

IV YEAR (2013 – 2017) – Passed out

S.No	Name of the Student	Total Grade points out of 1820	CGPA
1.	Razika Subhana A	1680	9.23
2.	Jayashree Y	1664	9.14
3.	Niveditha J R	1629	8.95
4.	Kavi Nila G	1625	8.93
5.	Amrutha C	1610	8.85
6.	Rohini N S	1608	8.84
7.	Pavithra Gabriel	1592	8.75
8.	Cheryl Pereira	1559	8.57
9.	Raveena Narayanee S	1555	8.54
10.	Kavipriya G	1553	8.53
11.	Madhumathi S	1553	8.53
12.	Navaneetha Krishnan K	1550	8.52
13.	Veena Mathangi G	1548	8.51

14.	Muthuselvam E	1547	8.50
15.	Guna Tweena Beniz J	1532	8.42
16.	Jithin Raj K	1527	8.39
17.	Mohanraj E	1526	8.38
18.	Snehaa E	1525	8.38
19.	Balaji T P	1513	8.31

III YEAR (2014– 2018) – Current IV Year

S.No	Name of the Student	Total Grade Points out of 1470	CGPA
1.	DELIGHT AZARIAH DANIEL W	1340	9.12
2.	PRASANTH N	1340	9.12
3.	J. MALATHI	1307	8.89
4.	SARAN KUMAR M	1304	8.87
5.	M. MUTHU NANDINI	1297	8.82
6.	SHIVANI K	1295	8.81
7.	G. NANDHINI	1291	8.78
8.	G.VISHALI	1285	8.74
9.	HARITHA JENNIFER.D	1279	8.70
10.	SUPRIYA.B	1278	8.69
11.	N.NOOR FASEEHA	1277	8.69
12.	SNEHA JOSE	1272	8.65
13.	ARUN KUMAR J	1259	8.56
14.	NAVEEN. B	1259	8.56
15.	GEETHA.N	1249	8.50
16.	KISHOR S	1249	8.50
17.	DANIEL MANOGARAN D	1247	8.48
18.	VINEETH ANTON JOSE T	1242	8.45
19.	THAILA. K	1237	8.41
20.	ABINAYA.J	1236	8.41
21.	E.YAMUNA	1223	8.32

II YEAR (2015 – 2019) – Current III Year

S.No	Name of the Student	Total Grade Points out of 980	CGPA
1.	Mohamed Ibrahim S	897	9.15
2.	Aakash V R	880	8.98
3.	Raghavendar S	874	8.92
4.	Aishwarya M	870	8.88
5.	Kaviya S	864	8.82
6.	Karthick Raj S	861	8.79
7.	Shijoy Thomas	860	8.78
8.	Daniela Onasis A	851	8.68
9.	Sriganesh Parameswaran	845	8.62
10.	Lamsy Alex	844	8.61
11.	Nandhitha S	844	8.61
12.	Rajeshwaran K	843	8.60
13.	Gobicca M	830	8.47
14.	Ajay Kumar V	825	8.42
15.	Kamalidevi J	824	8.41
16.	Mukilan T	815	8.32

FIRST YEAR (2016 – 2020) – Current II Year

S.No	Name of the Student	Total Grade Point out of 530	CGPA
1	Vedha Lakshmi S	477	9.00
2	Revathy R	475	8.96
3	Surendran V	464	8.75
4	Lenny Allwin Deepak F	457	8.62
5	Gokul Ramesh K	449	8.47
6	Madeshwaran J	449	8.47
7	Hariharan R	443	8.36
8	Roshni M	443	8.36
9	Earnestraj D	440	8.30
10	Yapase Sajil N	440	8.30

NGO (Non-Governmental Organization) Activities

It is pathetic that there are numerous orphanages and old age homes in our society. Our visionary Director yearns for extending a supporting hand to these needy persons. Also, he wanted to invoke the service mind of our students by encouraging visits to orphanages, old age homes and homes for CP children (children with Cerebral Palsy which causes physical disability in human development chiefly in vain areas of body movement). NGO activities bring out the hidden potentials of young minds to serve the needy and to make them responsible citizens. They are exposed to downtrodden lifestyle which is a need of the hour for our country's development.

Our college offers special lunch (Both Vegetarian and Non Vegetarian with sweets, savories and ice creams) to all the inmates of orphanages, old age homes and homes for CP children. Students are provided with transport facilities to visit the homes on activity Saturdays. All the students, from First year to Final year, both UG and PG enthusiastically participated and mingled with inmates of home and spent the daytime with them and shared their happiness. They also spent their pocket money in useful manner by offering the needy things like rice bags, groceries, toys, clothes, pillows etc. for the inmates.

The department of chemical engineering has participated on Saturdays and the activity was thoroughly enjoyed and appreciated by the students and faculties.

Date	Class	Name of the organization visited	Type of organization
09/07/2016	IV YEAR	GRACE CHILDRENS HOME	ORPHANAGE
30/07/2016	III YEAR	GLADDEN CHILDRENS HOME	ORPHANAGE
27/08/2016	II YEAR	GLADDEN CHILDRENS HOME	ORPHANAGE
07/01/2017	III YEAR	FAITH HOME	ORPHANAGE
04/02/2017	II YEAR	ANNAL CHILDRENS HOME	ORPHANAGE
11/02/2017	I YEAR	LITTLE HEARTS	ORPHANAGE

We wish to continue our service forever

STUDENTS ACTIVITIES
CURRICULAR, CO-CURRICULUR, EXTRA-CURRICULUR ACTIVITIES

S. No	Name of the Student	Year	Name of the Event	ORGANISER	PLACE WON
1.	Michael Sachinder. M	II	Technical Quiz	Sri Venkateswara College of Engineering	I
		II	Chem-Addict	Dr. M G R University	I
2.	Gopinath .R	II	Baloncesto	St.Peter's Engineering College	II
3.	Mohamed Ibrahim. S	II	Technical Quiz	Sri Venkateswara College of Engineering	I
		II	Baloncesto	St.Peter's Engineering College	I
4.	Pooja Mohankumar	II	Chemcrypto	SSN College of Engineering	I
		II	Mystery Project	SSN College of Engineering	II
		II	Paper Presentation	SSN College of Engineering	I
5.	Muthulakshmi Shunmugam	II	Paper Presentation	SSN College of Engineering	I
		II	Chemcrypto	SSN College of Engineering	I
		II	Mystery Project	SSN College of Engineering	II
6.	Nandhitha. S	II	Paper Presentation	SSN College of Engineering	I
		II	Chemcrypto	SSN College of Engineering	I
		II	Mystery Project	SSN College of Engineering	II
7.	Shashanka Bhat .P	II	Logozane BME	SSN College of Engineering	I
8.	Janesh .M	II	Mystery Project	SSN College of Engineering	III
9.	Alderick Nirmal Raj	II	Chem-Addict	Dr. M G R University	II
10.	Koushik Ram. B	II	Baloncesto	St.Peter's Engineering College	I
		II	Surprise Event	St.Peter's Engineering College	I
		II	Mystery Project	SSN College of Engineering	III
		II	Channel Surfing	Meenakshi Sundararajan Engineering College	III

11.	Aakash. V. R	II	Logozane BME	SSN College of Engineering	I
12.	Shijoy Thomas	II	Chem-Addict	Dr. M G R University	II
13.	Bharathi. M	II	Technical Quiz	St.Peter's Engineering College	II
		II	Baloncesto	St.Peter's Engineering College	II
14.	Supriya .B	III	Technical Quiz	Sriram Engineering College	III
		III	Paper Presentation	St.Peter's Engineering College	II
		III	Poster Presentation	St.Peter's Engineering College	II
15.	Yamuna .E	III	Technical Quiz	St.Peter's Engineering College	I
		III	Technical Quiz	Sriram Engineering College	III
16.	Vishali .G	III	Poster Presentation	Sriram Engineering College	I
		III	Technical Quiz	Sriram Engineering College	II
		III	Poster Presentation	St.Peter's Engineering College	II
		III	Paper Presentation	St.Peter's Engineering College	II
17.	Mothishree Surendra Babu	III	Poster Presentation	Sriram Engineering College	I
		III	Technical Quiz	Sriram Engineering College	II
		III	Poster Presentation	St.Peter's Engineering College	II
		III	Paper Presentation	St.Peter's Engineering College	II
		III	Paper Presentation	SSN College of Engineering	I
18.	Noor Faseeha. N	III	Bazzinga	Coimbatore Institute of Technology	I
		III	Paper Presentation	SSN College of Engineering	II
19.	Nandhini .G	III	Bazzinga	Coimbatore Institute of Technology	I
20.	Keerthana V	III	Bazzinga	Coimbatore Institute of Technology	I
		III	Quizzard	Coimbatore Institute of Technology	I
21.	Haritha Jennifer. D	III	Chanakya's Pitch	SSN College of Engineering	I

22.	Geetha .N	III	Chanakya's Pitch	SSN College of Engineering	I
23.	Aradhana. S	III	Chanakya's Pitch	SSN College of Engineering	I
24.	Mohamed Faizur Rahman. S	III	Paper Presentation	SSN College of Engineering	II
		III	Chemical Fantasy League	SSN College of Engineering	I
25.	Rajmohan. M	III	Chemical Fantasy League	SSN College of Engineering	I
26.	Ashein Herbert. J	III	Chemical Fantasy League	SSN College of Engineering	I
		III	Paper Presentation	SSN College of Engineering	III
27.	Sarankumar .H	III	Minute to win it	Sriram Engineering College	I
28.	Sinto Stephen	III	Minute to win it	Sriram Engineering College	III
		III	Technical Quiz	Sriram Engineering College	III
		III	Bioscope	Alpha College of Engineering	II
		III	AD-SKI	Alpha College of Engineering	II
29.	Robinson.N	III	Cross Fire	SSN College of Engineering	I
30.	Harish T	III	Chemcrypto	SSN College of Engineering	I
31.	Nithun Sree Hari .P	III	Shipwreck	Sriram Engineering College	III
32.	Mohammed Shahnawaz. S	III	Technical Quiz	Sri Venkateswara College of Engineering	I
33.	Shankara Narayanan. B	III	Short Film	Prathyusa College of Engineering	I
		III	AD-SKI	Alpha College of Engineering	II
		III	Bioscope	Alpha College of Engineering	II
34.	Raaghesh Raja .M	III	Tellurians	SSN College of Engineering	II
		III	Bioscope	Alpha College of Engineering	II
		III	AD-SKI	Alpha College of Engineering	II
35.	Sarankumar .M	III	Sherlock Holmes	SSN College of Engineering	II
36.	Delight Azariah Daniel.W	III	Chemcrypto	SSN College of Engineering	I

		III	Cross Fire	SSN College of Engineering	I
		III	Sherlock Holmes	SSN College of Engineering	II
		III	Math Olympiad	Stella Maris College	I
		III	Cross word	SRM University	II
37.	Daniel Manogaran.D	III	Chemcrypto	SSN College of Engineering	I
		III	Cross Fire	SSN College of Engineering	I
		III	Sherlock Holmes	SSN College of Engineering	II
38.	Sidhartha Gowtham .R	III	AD-SKI	Alpha College of Engineering	III
		III	Bioscope	Alpha College of Engineering	II
39.	Ramachandran .S	III	Bioscope	Alpha College of Engineering	II
		III	AD-SKI	Alpha College of Engineering	III
40.	Thaila.K	III	Open Quiz	Indian Institute of Technology, Madras	I
41.	Vineeth Anton Jose.T	III	Open Quiz	Indian Institute of Technology, Madras	I
42.	Arun Kumar.J	III	Machine Hunt	Madras Institute of Technology	I
43.	Manikandan.V	III	Machine Hunt	Madras Institute of Technology	I

STUDENTS CHAPTER ACTIVITIES

INDIAN INSTITUTE OF CHEMICAL ENGINEERING ACTIVITIES

Chemical Engineering club has conducted working model event on **“Pilot plant event – waste water treatment”** for III year chemical engineering under the banner of Indian institute of Chemical Engineering (IICHE). About 45 students were actively participated the event with the models designed and fabricated by themselves by applying their engineering knowledge. The preliminary round was conducted and shortlisted batches were allowed for final rounds of competition. The final round was conducted on 01.09.2016 at Mass transfer Lab (Chemical Engineering Lab Block) from 1.30pm to 5pm. Three best models were identified by the panel of judges comprising HODs.

The following 3rd year students have won prizes,

REGISTER NO	STUDENT NAME	PRIZE WON
312314203035	NAVEEN B	I
312314203304	VIJAYARAGHAVAN K	
312314203034	NANDHINI G	II
312314203033	MUTHU NANDHINI M	
312314203032	MOTHISHREE SURENDAR BABU	
312314203048	SARAH E	III
312314203049	SARAN KUMAR H	
312315203047	ROBINSON H	
312314203024	KISHOR S	
312314203058	THAILA K	

CURRICULAR ACTIVITIES

Our final year students of Chemical Engineering have done their projects in the following major industries:

- Orchid Chemicals and Pharmaceuticals ,Chennai
- CPCL, Chennai
- Tamilnadu Petro products Limited, Chennai.
- CETEX Petrochemicals Limited, Manali, Chennai.
- Madras Fertilizers Limited , Manali
- Manali Petrochemicals Limited, Chennai
- EID Parry India Ltd, Cuddalore
- CLRI, Chennai
- IIT Madras.
- SPIC
- National Institute of Ocean Technology.

GUEST LECTURES

Guest Lecture is a way of enriching our students with the latest updates of the Industries and Technicalities. The Students are bestowed with knowledge about Industry needs, latest technical updates, Avenues for Higher studies etc.

Eminent personality from prestigious institutions and organizations are regularly invited to share their knowledge on various emerging fields and changing trends.



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➤ A very informative Lecture on “Empowering the explored Knowledge – A Chemical Engineering View” by **Mr.Vinodh Kumar M , F.L.Smith** on 18.07.2016

➤ A very informative Lecture on “Membrane and its advancements” by **Ms.Irena Petrenic and Mr.Matjaz Kovse**, Professors, **University of Maribor, Slovenia** on 28.07.2016

➤ A very informative Lecture on “Modern Separation Process” by **Dr.Helen Kalavathy**, Assistant Professor, **Anna University** on 23.02.2017

INDUSTRIAL VISITS



❖ The final year students have visited “**Neyveli Lignite Corporation Limited**”, Neyveli on 21st July 2016. Students had a very good exposure about mining and power generation (thermal and renewable energy).

❖ The third year students have visited “**Ramco Cements Limited**”, Ariyalur, on 09th August 2016. Students had a good exposure about manufacture of Portland cement.

- ❖ The second year students have visited “**Paractives Technology Pvt. Ltd**”, Alathur on 03rd March, 2017. Students had a very good exposure
- ❖ The third year students have visited “**Apollo Breweries Pvt. Ltd**” Gummidipoondi on 24th February 2017. Students had gained knowledge on the production of breweries.

STUDENTS COMPETITIVE EXAM RESULTS

A **competitive examination** is an examination where candidates are ranked according to their grades. If the examination is open for n positions, then the first n candidates in ranks pass, the others are rejected.

They are used as entrance examination for post graduate in various university and colleges. Competitive examinations are considered an egalitarian way of choosing worthy applicants without risking influence peddling, favoritism or other concerns.



The following students are qualified in the various examinations like GATE, GMAT, etc.

S.NO	NAME OF THE STUDENT	NAME OF EXAMINATION	MARKS SECURED
1.	ARAVIND.G	GATE	31 out of 100
2.	ARUNACHALAM.S	GRE	303 out of 340
3.	DEEPIKA.R	GRE	305 out of 340
4.	MAHESWARI.C	GRE	307 out of 340
5.	NITISH.B	GRE	302 out of 340
6.	PRASANTH.C	GRE	307 out of 340
7.	PRAVIN BOSCO.C	GRE	305 out of 340
8.	SHRIRAM.R	GRE	305 out of 340
9.	SWETHA.V	GRE	304 out of 340
10.	ARUNACHALAM.S	TOEFL	90 out of 120
11.	DEEPIKA.R	TOEFL	97 out of 120
12.	JAFFIN SAM RAJ	TOEFL	53 out of 120
13.	MAHESWARI.C	TOEFL	92 out of 120
14.	PRASANTH.C	TOEFL	104 out of 120
15.	PRAVIN BOSCO.C	TOEFL	108 out of 120
16.	SHRIRAM.R	TOEFL	96 out of 120
17.	MOHAMMED SALMAN FARIS	TOEFL	57 out of 120

INTRA DEPARTMENT SYMPOSIUM 2016 - 2017

The department of Chemical Engineering conducted an intra-department symposium for all II, III and IV Year CHEMICAL ENGINEERING STUDENTS on **29-07-2016**. The students participated in various events Viz. **HOW WASTE STUFF WORKS, SHIPWRECK, LOGO QUIZ, ADZAP & TECHNICAL QUIZ**. Prize amount of **₹10,000** was distributed to the prizewinners of all the above-mentioned events.

S. No	Event	I PRIZE – Rs.1000/-		II PRIZE- Rs.500/-		III PRIZE -Rs .400/-	
		Student Name	Year	Student Name	Year	Student Name	Year
1	Adzap	AlrinRosarrio SJ	IV	Kishore S	III	Alderick Nirmalraj	II
		BalaJegan K	IV	Prasanth N	III	Bharathi M	II
		Harshad k	IV	Thaila K	III	Gopinath R	II
		Gowtham C	IV	Vineeth Anton Jose T	III	Manoj G.C	II
2	Technical Quiz	Anto Feix Solvik G.S	IV	Harshad K	IV	Kavipriya G	IV
		JithinRaj.K	IV	Vishnu N.R	IV	Raveena Narayanan S	IV
3	Logo Quiz	Alrin Rosarrio G.S	IV	Daniel Manogaran D	III	Arvinth V	IV
		Vishal. V	IV	Saran Kumar M	III	Mohammed Nafil. M	IV
4	ShipWreck	Arvinth V	IV	G Nandhini	III	Aakash V.R (II)	II
5	How waste stuff works	Jayashree.Y	IV	Arjunlal R	IV	Raghavendar.S	II
		Mahima H	IV	Saravanan C	IV	Shijoy Thomas	II
				SuriyaPrakash S	IV		

INTRAMURAL SPORTS

In our college intramural sports was conducted to encourage the students to participate in sports activities. Various houses were formed among all departments and it is mentioned by different names. In our house CHEMICAL, BIOTECH and ICE are grouped together and named as CRANE.

For II year it is conducted on July 28th 2016

❖ Volleyball (Men) - WINNERS



For III year it is conducted on July 27th 2016

❖ Basketball (Women) - RUNNERS UP



For IV year it is conducted on July 26th 2016

❖ Volleyball (Women) - RUNNERS UP



❖ Ball Badminton (Men) - RUNNERS UP



❖ Football (Men) - RUNNERS UP

Winners of Chemical Engineering Department in intramural sports day are as follows

S.NO	Name of the Students	Year	Name of the Game	Place
1.	Boldwin Davis.H	II	Volleyball (Men)	Winners
2.	Gopinath.R			
3.	Harish.B			
4.	Mukilan.T			
5.	Sabarish.B			
6.	Shijoy Thomas			

NATIONAL TECHNICAL SYMPOSIUM – JET CHEM 2016

On **September 8th, 2016**, the 19th National Students' Symposium "JET CHEM 16" was conducted by the Department of Chemical Engineering. **Rs 18,000 prize money was awarded to the winners of all the events.** Students from various institutions VIZ, AC College of Technology, Anna University, Chennai and Trichy, SSN College of Engineering, Chennai, Vel Tech High Tech Engineering College, Chennai, Sathyabama University, Chennai, Sri Venkateswara College Of Engineering Chennai participated in the symposium.

- ❖ Total no. of Colleges Participated – **08**
- ❖ No. of Participants – **33**

Sl. No	Event	I prize- Rs. 1500/-	II Prize- Rs.1000/-	III prize- Rs.500/-
1	TECHNICAL QUIZ	1)MANOHAR.N.T 2)BABU.B	1)P.T.MOHAN KUMAR 2) MOHAMMED ISMAIL SALMAN	N1)S.FAIZAL ALI 2)R.NAREENDRAN
		SSN COLLEGE OF ENGINEERING	SSN COLLEGE OF ENGINEERING	B.S.ABDUR RAHMAN UNIVERSITY
2	GET IT RGH T	1)ABISHEK.A 2)HITEESH AUGUSTUS	1)MANOHAR.N.T 2)BABU.B	1)N.NIHAARIKA 2)V.RESHMA SONA
		SATHYABAMA UNIVERSITY	SSN COLLEGE OF ENGINEERING	ANNA UNIVERSITY
3	CHEMCHARADES	1)M.MOHAMMED ISMAIL SALMAN 2)MOHAN KUMAR.P.	1)D.N.KAVIARASAN 2)S. MANIKANDAN	1)G.PARASURAMAN 2)M.KASIMUTHU
		SSN COLLEGE OF ENGINEERING	ADHIPARASAKTHI ENGINEERING COLLEGE	SSN COLLEGE OF ENGINEERING
4	MINUTE TO WIN IT	1) S.SATHIYAN 2) NADESH.A	1)MANOHAR.T 2)LIONELL SIBI	1)CHANDRA SEKAR.R 2) IJAI DHYANA
		SSN COLLEGE OF ENGINEERING	SSN COLLEGE OF ENGINEERING	B.S.ABDUR RAHMAN UNIVERSITY
5	CEREBRO	1)ANANDH.S 2)LOGANATHA 3)PRAKASH.V	1)MANOHAR.N.T 2)BABU.B	1)HITEESH AUGUSTUS 2)ABISHEK 3)KHIZER AHMED.M
		VEL TECH HIGH TECH DR.SAKUNTHALA DR,RANGARAJAN ENGG COLLEGE	SSN COLLEGE OF ENGINEERING	SATHYABAMA UNIVERSITY

6	WORKING MODEL	G.PARASURAMAN M.KASIMUTHU	S.NITHYA GANESH T.GANESHRAJ
		Prize amount:2000	Prize amount:1000
		SSN COLLEGE OF ENGINEERING	SSN COLLEGE OF ENGINEERING

VALUE ADDED COURSES

Our college is always one-step ahead in motivating and shaping up our students towards their career development. In this aspect, we are conducting value added courses, which are courses beyond their curriculum, designed to enhance the knowledge of the students in their core fields and specialize themselves in the latest technologies pertaining to their chosen field of studies. Completing such value added courses makes the students to:

- Enhance their learning skill, technical creativity and innovative ideas.
- Gain exposure towards recent trends in core fields augmenting their employability.
- Endeavor them for higher studies in India and abroad.
- Compete with the fellow students globally.
- Carry out innovative projects thereby contributing to research and development.

Our institution has signed Memorandum of Understanding (MoU) with many leading organizations to organize value added courses to students, to take up specialized courses, which are currently being used in the industries. The students have the option to choose the courses according to their desires and inclinations. During the last academic year, students have undergone various value-added courses based on their interest. In our department many students were benefited and the details are given below.

Department	Year	Value added Courses	No of Students
CHEMICAL ENGINEERING	III	MITIGATION OF CORROSION IN PROCESS INDUSTRIES	71
CHEMICAL ENGINEERING	III	ONLINE course C LANGUAGE	57

- 71 students have attended course on **Mitigation of corrosion in process industries** by CECRI scientist conducted at St. Joseph's College of Engineering.
- 57 students from 3rd year Chemical Engineering have **attended ONLINE course on C language** conducted online by **IIT, Bombay** through spoken tutorial program, Anna University, Chennai, conducted at St. Joseph's College of Engineering.

II YEAR VALUE ADDED COURSES -- C, C++

Value Added Courses are provided to students with an aim to teach and train in programming skills. The goal is to accelerate the programming capability needed for solving scientific and real time problems demanded by the corporate world. Students have options to choose the courses according to their desire and inclination. It is great boon to our students, in expertise various Value Added Courses which enables them to face the formidable challenges.

C/C++ course was provided by **EBOX** from 06/03/2017 to 08/03/2017 and around **61 students** are benefited by the course.

Course Objective – C/C++

To facilitate the fundamentals of structured and Object Oriented programming concepts and to enhance the programming aspects in C/C++.

The outcome of this course is to enable the students to

- Identify the usage of complex data types to solve scientific and real world problems.
- Identify the major elements in an object-oriented programming language.
- Implement operate or overloading.
- Select the proper class protection mechanism.
- Derive classes using inheritance in C++.
- Demonstrate the use of virtual functions to implement polymorphism.
- Write programs utilizing the I/O classes in C++.
- Understand some advanced features of C++ including templates, exceptions, and multiple inheritance.

It is a matter of pride that the courses are taught by the experts from industries using the laboratory facilities available in our institutions to meet the requirements of industry

On successful completion of such value added courses make the students to:

- ✓ Accelerate the programming skills
- ✓ Carryout innovative projects
- ✓ Compete with the fellow students during placement and interview process.

செயிண்ட் ஜோசப்ஸ் பொறியியல் கல்லூரி

செயிண்ட் ஜோசப்ஸ் கல்விக் குழுமம்

தமிழ் மன்றம்

பட்டிமன்றம் அறிக்கை- 2017

செயிண்ட் ஜோசப்ஸ் பொறியியல் கல்லூரியில் டாக்டர். எம்.ஜி.ஆர். அவர்களின் பிறந்த நாள் விழாவை முன்னிட்டு 07.02.2017 அன்று செயிண்ட் ஜோசப்ஸ் பொறியியல் கல்லூரி தமிழ் மன்றம் சார்பில்

" சமுதாய முன்னேற்றத்திற்கு பெரிதும் துணை புரிவது

அனுபவமிக்க முதியோர்களே! ஆற்றல் மிக்க இளைஞர்களே!"

என்ற தலைப்பில் பட்டிமன்றம் நடைபெற்றது.

கல்லூரித் தலைவர் மற்றும் நிர்வாக இயக்குனர் டாக்டர்.பாபுமனோகரன், முதல்வர் டாக்டர். வட்டி சேஷகிரி ராவ் ஆகியோர் முன்னிலையில் நடைபெற்ற இந்த பட்டிமன்றத்தில் புலவர் திரு. மா. இராமலிங்கம் நடுவராக பொறுப்பேற்று "சமுதாய முன்னேற்றத்திற்கு பெரிதும் துணை புரிவது அனுபவமிக்க முதியோர்களே!" என்று தீர்ப்பு வழங்கினார். ஆசிரியர்களும், மாணவர்களும் நடுவரது நகைச்சுவையான பேச்சைக் கேட்டு மகிழ்ந்தனர்.

அனுபவமிக்க முதியோர்களே! என்ற அணியில் மாணவர்கள் தி. சுபஸ்ரீ, (I BIO), வெ. பாலாஜி, (I ECE A), ரா. வில்சன் செல்வா, (I EEE C), வை. ஏஞ்சலின் வைஷாலி, (I ECE A), கு. ஜா. ஜோசன் ரஞ்சித், (I CIVIL) ஆகியோரும்,

ஆற்றல்மிக்க இளைஞர்களே! என்ற அணியில் மாணவர்கள் ந. இனியன், (I IT A), அ அப்துல் ஆஷிக் (I EEE A), பொ. லிண்டா ரோஸ்லின், (I ECE B), இர. சந்தோஷ் கல்யாண் (I MECH C), ம. செளகந்திகா, (I IT C) ஆகியோரும் பங்கேற்று வாதிட்டு அனைவரது பாராட்டுக்களையும் பெற்றனர்.

இவர்களில் ஏஞ்சலின் வைஷாலி மற்றும் இர. சந்தோஷ் கல்யாண் ஆகியோரை சிறந்த பேச்சாளர்களாக தேர்வு செய்து, கல்லூரித் தலைவர் அவர்கள் ரொக்கப்பரிசு ரூபாய் 1000 அளித்து பாராட்டினார். பங்கேற்ற அனைவருக்கும் பங்கேற்பு சான்றிதழ் வழங்கப்பட்டது.

ACHIEVERS DAY 2017

Achievers day is celebrated every year during the month of April, in which students who brought laurels to the College during the academic year are honored and rewarded.

Achievers Day for the Academic year 2016-17 was celebrated on 08. 04. 2017. The students who won various competitions have been invited. The invitees were



- Total Sports and Games Teams : **316**
Players
- Inter-collegiate Paper presentation, Symposium, Conference position winners:
1463 Students
- **Blood donors** from **Youth Red Cross** : **53** Students
- Members of **Tamil Mandram**: **20** Students
- Members of Our College **Student Orchestra** Team : **44** Students
- Inter-collegiate **Cultural Competition** Winners : **43** Students

No. of Students Honoured	Total Amount Distributed
1962	Rs. 13.07 Lakhs

On the whole 1962 Students of our college belonging to various categories mentioned above were honored by distributing cheques and certificates on this special occasion.

This special function started at 6.30 P.M. with the High Tea followed by the distribution of Gifts. This event was made even more startling by our College Orchestra team and Dance Program by the students. The event ended at 9.00 P. M. with Splendid Vegetarian and Non-Vegetarian Dinner.

OVERALL SPORTS ACHIEVEMENTS

We proudly announce
that we have achieved
**Over All Championships
For the past 14 years**

In the following

Mega State Level Tournament/ Meets
conducted for all the
Engineering Colleges/ Arts Colleges in Tamilnadu

1. ANNA UNIVERITY INTER ZONAL TOURNAMENTS

From 2003 to 2016

Conducted for 631 Engineering Colleges in Tamilnadu

2. TIES (TAMIL NADU INTER ENGINEERING SPORTS)

From 2003 to 2016

Conducted for 631 Engineering Colleges in Tamilnadu

3. JETS

From 2003 to 2016

Conducted for Arts, Science and Professional Colleges in South India

4. St. JOSEPH'S INTER COLLEGIATE ATHLETICS MEET

From 2003 to 2016

Conducted for Arts, Science and Professional Colleges in South India

SPORTS ACHIEVEMENTS (2016-17)

SPORTS ACHIEVEMENT FOR MEN

KABBADI		HOCKEY	
ZONE III	WINNER	ZONE III	WINNER
SAIRAM TROPHY -2017	3rd PLACE	INTER ZONE	RUNNER
DB JAIN TROPHY 2016	RUNNER	Tiruvarur Trophy 2016	RUNNER
FOOTBALL		IIT TROPHY-2016	RUNNER
ZONE	RUNNER	Thiyaharaja Trophy 2017	RUNNER
B.S.Abdur rahamman Trophy -2017	3rd PLACE	WEIGHT LIFTING, POWER LIFTING	
TABLE TENNIS		BEST PHYSIQUE	
ZONE III	RUNNER	Inter zone (Weight lifting)	RUNNER
S A TROPHY-2017	3 rd PLACE	Inter zone (Power lifting)	RUNNER
		Inter zone (Best physique)	WINNER
TENNIS		CHESS	
ZONE III	RUNNER	ZONE III	WINNER
S A TROPHY-2017	RUNNER	INTER ZONE	3 rd PLACE
CRICKET STAFF		S A TROPHY-2017(COMBINED)	WINNER
SSN TROPHY 2017	RUNNER	LICET TROPHY 2017	3 rd PLACE
BADMINTON		VOLLEYBALL	
ZONE III	3 rd PLACE	Volley ball tournament (Maraimalai nagar)	RUNNER
BALL BADMINTON		ZONE-III	WINNER
ZONE III	WINNER	INTER ZONE	RUNNER
INTER ZONE	WINNER	Bharathi volleyball club state level tournament(pondy)	3 rd PLACE
B.S.Abdur rahamman Tournament-2017	3 rd PLACE	SAIRAM TROPHY-2017	RUNNER
Ms & Mrs Baulraj Memorial ball badminton 'B' grade Tournament	3 rd PLACE	State level invitation volleyball tournament(vadugapatti)	WINNER
BASKET BALL		State level invitation volleyball tournament (Rajapalayam)	WINNER
ZONE III	WINNER	SVEC TROPHY-2017	RUNNER
INTER ZONE	3 rd PLACE		
SVEC TROPHY-2017	WINNER		
B.S.Abdur Rahamman Tournament	RUNNER		

SPORTS ACHIEVEMENT FOR WOMEN

BASKET BALL		TABLE TENNIS	
ZONE-III	WINNER	ZONE III	WINNER
S A TROPHY-2017	WINNER	INTER ZONE	WINNER
INTER ZONE	3 rd PLACE	MOP TROPHY-2016	RUNNER
MOP VAISHNAVA TROPHY-2016	3 rd PLACE	SSN TROPHY-2016	3 rd PLACE
VOLLEY BALL		Weight Lifting, Power Lifting	
SAVEETHA TROPHY 2017	WINNER	INTER ZONE(WEIGHT LIFTING)	RUNNER
ZONE-III	RUNNERS	INTER ZONE(POWER LIFTING)	RUNNER
SA TROPHY-2017	RUNNER		
TENNIS		KABBADI	
GRAND SLAM TENNIS ACADEMI	WINNER	INTER ZONE	3 rd PLACE
BADMINTON		CHESS	
ZONE III	RUNNER	MOP TROPHY-2016	RUNNER
LICET TROPHY 2017	3 rd PLACE	ZONE III	RUNNER
		SA TROPHY(COMBINED)	WINNER

ANNA UNIVERSITY BLUES (2016-17)

S NO	NAME	BRANCH & YEAR OF	GAME
1.	MOHAMMAD NISAN M	I MBA	ATHLETICS
2.	VIMAL MUGESH T	IV B.E (ICE)	ATHLETICS
3.	SOORYA B	III B.E (CIVIL)	ATHLETICS
4.	SABARISANKAR K	III B.E (ICE)	ATHLETICS
5.	HARI HARAN A	I MBA	ATHLETICS
6.	KANNAN K	II MBA	ATHLETICS
7.	PRAVEEN B	III B.E(ICE)	ATHLETICS
8.	PRAVEEN GUPTA M S	II B.E (ECE)	AQUATICS
9.	PRITHVI RAJ C S B	II B.E(CIVIL)	AQUATICS
10.	DHANUSH KUMAR B	III B.E (IT)	BADMINTON
11.	SAKTHI MAHESWARI S	I B.E (IT)	BADMINTON
12.	JEYARAMAN R	III B.E (EIE)	BALL BADMINTON
13.	MUTHUKUMAR S	II MBA	BALL BADMINTON
14.	MANIVANAN M	III B.E (ICE)	BALL BADMINTON
15.	SATHISH M	IV B.E(MECH)	BASKET BALL

16.	DIVYA S	II B.E (EIE)	BASKET BALL
17.	SUCHITHRA J	II B.E (EEE)	BASKET BALL
18.	AJAY KRISHNA S	I B.E (MECH)	CHESS
19.	GANESH R	III B.E(IT)	CHESS
20.	SARANYA J	IV B.E (IT)	CHESS
21.	BHAVANI DEVI C A	I MBA	FENCING
22.	GANKATHRAN C	I MBA	HOCKEY
23.	ARAVIND SAMY C	III B.E (EEE)	HOCKEY
24.	SARATH BABU C	III B.E (ECE)	HOCKEY
25.	DEEPIKA S	III MCA	JUDO
26.	ALLIRANI K	I B.E (EIE)	KABADDI
27.	NANDHINI M	IV B.E(EIE)	KABADDI
28.	RANJITH M	I M.E (MANU)	POWER LIFTING
29.	PRABHU T	III B.E (MECH)	POWER LIFTING
30.	YUSUF BABU S	II MBA	POWER LIFTING
31.	RAMYA P	I MBA	POWER LIFTING
32.	AJAY NARAYANAN	III B.TECH (IT)	ROWING
33.	ADHITHIYAN G	II B.E (EEE)	TABLE TENNIS
34.	ATHITYAN G	II B.E (CIVIL)	TABLE TENNIS
35.	AJITH KUMAR S	II B.E (EEE)	TABLE TENNIS
36.	SHANMATHI S	III B.E (CSE)	TABLE TENNIS
37.	RAVEENA DEENADAYALAN	III B.TECH (IT)	TABLE TENNIS
38.	BALAJI G V	II B.E (ECE)	TAEKWONDO
39.	SRIJITH S	II B.E (CSE)	TENNIS
40.	SURIYAN P A	III B.E (CIVIL)	TENNIS
41.	SUBRAMANIYAN V	III B.E (CIVIL)	VOLLEY BALL
42.	PALANI G	IV B.E (EIE)	VOLLEY BALL
43.	RAMAKRISHNAN G	II B.E (EEE)	VOLLEY BALL
44.	PRAVEEN KUMAR K	IV B.E (EIE)	VOLLEY BALL
45.	LALUPRASATH S	I B.E (CIVIL)	WEIGHT LIFTING
46.	KARTHIK S	II B.E (MECH)	WEIGHT LIFTING
47.	MOHIDEEN AROON	II B.E (EEE)	BEST PHYSIQUE
48.	MUTHUVEL G	III MCA	BEST PHYSIQUE
49.	NAGARAJAN K	II MBA	BEST PHYSIQUE
50.	VENUGOPAL P	II M.E(PE)	BEST PHYSIQUE

SPECIAL OCCASIONS

IFDHAR Our College celebrated Ramzan on **4th July 2016**. All the Muslim students in our college underwent fasting within the campus. The early morning food called as “sahar” according to the Muslim custom, was served with delicious items by the college in the mess at 4.30 a.m. In the evening, the Muslim students were served for “Ifthihar” with dates, cool drinks porridge as a sign breaking the fast. The hostel students attended Namaz in their respective hostel rooms. Special Namaz was conducted at 1.00 p.m on Fridays. During Ramzan fasting period, prayers were conducted in our collegemosque.

Onam The festival of rice harvest was celebrated on **6th Sep 2016** with great spirituality and delight. All Malayali students participated with enthusiasm on this special occasion. Our Beloved Chairman & Managing Director attended this festival with his family and conveyed his wishes to all the students. Malayali students dressed up in their traditional wear, particularly girls wearing the kasavu saree and performed kaikottikali, Malayalam pattu and Nadakam. The celebration was called off with the grand dinner where the menu included aviyal, erussery, pulissery, nenthram pazham and different types of payasam.

Teachers Day Our College celebrated the Teachers day as a special occasion from **Aug 29 to Sep 3 2016**. The students entertained their respective department’s faculty members with unique shows on that special day. Our Management gave gifts to all the teachers of our college as a token of appreciation.

Vinayaka Chaturthi Our college celebrated Vinayaka Chaturthi on **5th September 2016**, by decorating Ganesha’s statue of our college temple with flowers. Pooja was grandly performed in the temple in the presence of our beloved Chairman & Managing Director’s family. Delicious food was offered to the Lord and Kozhakatai was distributed to the students. Many students came forward to participate on that occasion and filled in with all blessings of Ganesha.

Ayudha pooja Our College celebrated Ayudha Pooja on **8th October 2016**, by arranging Kolu for 9 days in our college from the day of Mahalaya Amavasya till Vijayadasami. On this special day, all the Laboratories and Office were beautified with plantain trees, mango leaves and glazing papers followed by a pooja in the presence of Chairman & Managing Director’s family. The remarkable part of this celebration was the mouth-watering lunch, sweets and ice creams that were served for all the students and staff. Gift vouchers for deepavali were distributed on the day of Ayudha pooja to Administrative staff, Technical staff, Non-Technical staff, Drivers, Sweepers, workers in the mess and daily wage workers.

Deepavali The festival of lights is celebrated with full delight and enthusiasm. Deepavali is the most expected festival by all. This year the festival of lights was celebrated on **27th October 2016**. On this special eve, a grand lunch with exotic dishes ranging from mouth lingering sweets to delicious deserts was served.

Deepam Kaarthigai Deepam is celebrated on the full moon day in the Tamil month of Kaarthigai. This festival is known for brightened lights lit all over the place signifying growth and prosperity. The deepam celebrations took place in our college on **12th December 2016** with lamps lighted by the divine flame that is believed to fend off evil forces and escort ecstasy.

Christmas Christmas is the season of joy, holiday greetings exchanged, gift-giving, and families getting united. The Christmas celebrations took place in the college campus on **17th December 2016**. On Christmas day, a special mass was conducted in the college chapel. The celebrations included a rhythmic performance from the college choir and an add-on surprise package by Santa Claus. The staff and students were completely spellbound with the Christmas gratification and the day was called off with a hearty lunch.

Padi pooja The festival was celebrated on **7th January 2017** by decorating the holy steps of Ayyappa with flowers and silk clothes and lighting traditional lamp. The Chairman & Managing Director, Staff and Students attended the pooja and “irumudi” was tied to those who went to sabarimala. Traditional songs were sung in pooja and a grand feast was given to those who attended pooja.

Pongal is an occasion that is believed to chime in the opulence. It is renowned as a thanksgiving festival for various Hindu deities. “Thai” is the first month of the Tamil Almanac where the joy-filled Pongal occasion comes. The celebration in the college took place on **12th January 2017**. The day’s lunch was served with different varieties of Pongal. Indeed, Pongal is a festival of freedom, peace, unity and compassion crystallized in the last hymn on unity in the Indian spiritual text the Rig Veda.

Hostel Day Hostel day is one of the most awaited occasions of the year in St. Joseph’s College of Engineering. This wonderful day was celebrated in the college on **11th March 2017** with lots of events conducted for both boys and girls. The hostel was decorated with colour lamps and balloons making it more eye-catching. Cricket, Volleyball, Basketball, Kabaddi matches were held and the winners and runners were awarded with cash prizes. Cultural events such as singing, skit and dance were performed in the presence of our beloved Chairman & Managing Director. Matches and other events were conducted 3 days prior to hostel day. Special dinner and snacks was provided to the hostilities.

Ugadi Our college celebrated Ugadi on **29th March 2017**. The Telugu New year festival popularly called as Ugadi comes close on the heels of Holi. This day of celebration is marked by religious fanaticism and social jollity. Special dinner was served for the hostel students. Exotic dishes made with raw mango went on well with the occasion. Ugadi which is considered to be the most auspicious time to start new ventures was indeed a cheerful and a memorable celebration to be remembered by the staffs and students of our college.

Easter Our College celebrated Easter on **12th April 2017**. Easter is the springtime holiday marking the rebirth of Jesus and the renewal of the Christian faith. A special program was conducted by St. Joseph’s College Fellowship in our college Placement Cell which was attended by students and staff. The celebrations started with worship songs and prayer. Heartfelt wishes were shared among everyone and ended off with holy blessing of God.

ARTICLES

GREEN ENGINEERING

Green engineering is the design and manufacturing of products and processes that have the least negative impact on the environment. It is a way to make things we use in everyday life more efficient, safe and long-lasting. All engineers can utilize green engineering principles regardless of the specific area of engineering they are focused on. The field of green engineering relies on certain principles such as minimizing waste and minimizing the use of natural resources that are not sustainable.

A green engineer might work with scientists to determine if building a bridge in a certain location could hurt the ecosystem of that area. They try to make the disruption as small as possible, and they do everything they can to keep the ecosystem thriving. If a plant is being built in a certain part of the world, the green engineers study and analyze how it will affect the culture and they determine if it is a good or bad idea. One of the largest efforts in green engineering is reducing the heating and cooling needs since it contributes a lot to greenhouse gas emissions. Many industrial facilities use a combined heat and power system to capture the heat produced by generating electricity and redirects it.

Engineers and scientists worldwide are leading the charge to address one of the largest challenges the society faces, and they have the unique opportunity to make a huge impact on the environment.

Green engineering provides the tools, techniques, and technologies to foster this innovation.

- M.Haripriya
(II Year Chemical)

GREEN SUSTAINABILITY

The future is going to be largely what we design it to be. Will the future be one of continued challenges from shortages of water, depletion of finite material? The role of engineers and designers on all scales—molecular, products, processes, and systems— is going to be central and essential in determining what tomorrow will look like. Green engineering—engineering for sustainability—uses the same traditions of brilliance, innovation, and creativity, which are the legacy of the engineering disciplines, within the context and perspective of environmental, economic, and social benefit.

This new application of engineering excellence to sustainability is among the most complex and important challenges faced by science and technology. Green Engineering, which highlights state-of-the-art research in engineering for sustainability. This is certainly a recognition that in order to meet the grand goals of sustainability, changes in the way we approach science and technology will be required. The vital and significant work in green engineering to date is a fraction of what is yet needed and realizable.

- Aakash.V.R
(III Year Chemical)

HOW GREEN ENGINEERING WORKS

In the not-so-distant past, businesses seldom went out of their way to draw attention to their impact on the environment. For one thing, the impact often wasn't all that good -- a lot of waste and pollution would go into turning raw materials into a shiny new thing that customers purchased in stores. For another, the stakeholders of companies, that is, government regulators, owners of stock, people who shared their communities with firms, and customers

didn't really expect as much as they do today in the way of "green" business practices.

Contrast that with today where nearly every company that makes something is under scrutiny for how friendly its processes and products are to the environment. There's actually an entire discipline that's bubbled up around the idea of making things better for the environment right from the start. That discipline is called green engineering.

The basic definition of green engineering, according to the College of Engineering at Virginia Tech, is "environmentally conscious attitudes, values, and principles, combined with science, technology, and engineering practice, all directed toward improving local and global environmental quality".

-Balaji P L
(III Year Chemical)

THE APPROACH TOWARDS ENVIRONMENT

Green engineering approaches design from a systematic perspective, which means that numerous professional disciplines must be integrated. In addition to all engineering disciplines, green engineering includes land use planning, architecture, landscape architecture, and other design fields, as well as the social sciences (e.g. to determine how various groups of people use products and services. Designers have always been concerned with space. Architects consider the sense of place. Engineers view the site map as a set of fluxes across the boundary. Planners consider the combinations of these systems over larger regions, e.g. urban areas. The life cycle analysis is an important green engineering tool, which provides a holistic view of the entirety of a product, process or activity, encompassing raw materials, manufacturing, transportation, distribution, use, maintenance, recycling, and final disposal. In other words,

assessing its life cycle should yield a complete picture of the product. The first step in a life cycle assessment is to gather data on the flow of a material through an identifiable society. Once the quantities of various components of such a flow are known, the important functions and impacts of each step in the production, manufacture, use, and recovery/disposal are estimated. Thus, in sustainable design, engineers must optimize for variables that give the best performance in temporal frames.

- Syed Shaniff Riswan
(III Year Chemical)

IMPROVING THE ENVIRONMENT AND THE BOTTOM LINE

Over the past year, the mainstream media has dramatically increased its emphasis on all things "green." Concerns about global climate change, soaring energy prices, and increased government legislation are driving new priorities and expectations – from consumer products to corporate responsibility and sustainability plans. To meet these new demands, companies, big and small, around the world are scrambling to not only create products and technologies that address these concerns but also change the ways and processes by which they are developed. Engineers and scientists worldwide are leading the charge to address one of the largest challenges society faces, and they have the unique opportunity to make a bigger impact on the environment than any government policy. Green engineering provides the tools, techniques, and technologies to foster this innovation.

- Antony George W
(III Year Chemical)

EXTENT OF GREEN ENGINEERING

To varying extents, all engineering disciplines engage in green engineering. This includes sustainable design, life cycle analysis (LCA), pollution prevention, design for the environment (DfE), design for disassembly (DfD), and design for recycling (DfR). As such, green engineering is a subset of sustainable engineering. Green engineering involves four basic approaches to improve processes and products to make them more efficient from an environmental standpoint.

1. Waste reduction;
2. Materials management;
3. Pollution prevention; and,
4. Product enhancement.

The systems approach employed in green engineering is similar to value engineering (VE).

Daniel A. Vallero considers green engineering to be a form of VE because both systems require that all elements and linkages within the overall project be considered to enhance the value of the project. Every component and step of the system must be challenged. Ascertaining overall value is determined not only by a project's cost-effectiveness, but other values, including environmental and public health factors. Thus, the broader sense of VE is compatible with and can be identical to green engineering, since VE is aimed at effectiveness, not just efficiency, i.e. a project is designed to achieve multiple objectives, without sacrificing any important values

- Harish B
(III Year Chemical)

MISSION OF GREEN ENGINEERING

Green Engineering's mission is to satisfy the needs of local governments that do not have in-house engineering capabilities and to supplement engineering departments that require specialized skills. The mission today remains virtually unchanged. However, the company's client base has expanded over the last half century to include multi-

national corporations, universities and colleges, public schools, branches of the armed forces, federal agencies, private developers, and state government.

From the inception, has been recognized for its planning, design and construction management work in all types of wastewater treatment and disposal facilities, water treatment and distribution systems, industrial parks, shopping centers, airports, correctional facilities, government installations, county roads and interstate highways. Its pioneering specialization in advanced wastewater technologies, such as water reuse, land application and conjunctive uses, is acknowledged statewide.

- Vishal B
(III Year Chemical)

GREEN DIESEL

Green diesel is derived from renewable feedstock by using biomass to liquid or hydrotreating plant oils (for example: canola, algae, jatropha and salicornia) or animal fats. Based on the processing technology and chemical formula, green diesel is chemically different from biodiesel. While biodiesel is processed using transesterification, green diesel is processed by the traditional fractional distillation like petroleum diesel. Green diesel has chemical properties identical to petroleum diesel, while biodiesel is not a pure hydrocarbon (it contains oxygen atoms, hence the somewhat different physical properties).

- Shijoy Thomas
(III Year Chemical)

THE PROSPECT OF A SOLAR HYDROGEN ECONOMY

Hydrogen offers interesting application benefits compared to natural gas and petroleum. But it cannot be found in nature in its pure form. Instead, it must be won through complex processing of fossil

fuels or by electrolysis from water. Electrolysis requires electricity, which could be produced from renewable energy sources, but also by nuclear power stations. Its production from fossil fuels causes global warming and is not sustainable.

Frequently, the discussion comes back to generating electricity from solar radiation in North Africa, for example in the Sahara. Hydrogen would then be transported to Europe and used here to provide heat, generate electricity and as fuel for vehicles ('solar hydrogen economy').

The prospects for such a solar hydrogen economy are small. In particular, it makes little sense to convert electricity - the highest quality form of energy - into hydrogen, which is then re-converted into electricity or heat at the point of use. This adds another step in the energy conversion chain with additional costs and above all additional energy losses.

Repeatedly, projects have been presented to produce electricity in the desert, and use this electricity for the production of hydrogen for Europe. They fail because of extremely high costs and technical difficulties, for example the supply of high-purity water in the desert, needed for the electrolysis, or the transport of hydrogen to Europe with reasonable losses. If one would succeed - at a high cost - to produce electricity from solar power in the Sahara, then it would make much more sense to use low loss HVDC (High-Voltage Direct Current) transmission. This would allow direct use of this electricity, rather than through the double conversion via hydrogen.

At best, the use of hydrogen as energy source could offer a meaningful alternative for mobile applications, e.g. motors or fuel cells in passenger cars, provided cheap production and storage facilities are available.

The production from natural gas could be defended as a temporary solution, but is not sustainable in the longer term. The production by electrolysis using solar electricity is theoretically conceivable, but

might remain limited to special cases for cost reasons (solar electricity will be much too expensive for a long time). Nuclear energy and (outside Europe) hydropower offers the best long-term prospects for the production of electricity needed for electrolysis.

- S.Raghavendar
(III Year Chemical)

WHAT KIND OF MODERN "GREEN" CHEMICAL ENGINEERING IS REQUIRED FOR THE DESIGN OF THE "FACTORY OF FUTURE"?

Confronted with the globalization of the markets, acceleration of partnerships and innovation, and to offer a contribution to the fight against environmental destruction and non sustainable behaviour of the today world production, the chemical and related industries militate for the evolution of chemical engineering *in favour of a modern process engineering voluntarily concerned by sustainability (the green process engineering)* that will face new challenges and stakes bearing on complex systems at the molecular scale, at the product scale and at the process scale.

Indeed the existing and the future processes will be progressively adapted to the principles of the « green chemistry which involves a modern approach of chemical engineering that satisfies both the market requirements for specific nano and microscale end-use properties of competitive targeted green (sustainable) products, and the social and environmental constraints of sustainable industrial meso and macroscale production processes at the scales of the units and sites of production.

These last constraints require an integrated system approach of complex multidisciplinary, non-linear, non equilibrium processes and transport phenomena occurring on the different time and

length scales of the chemical supply chain, which means a good understanding of how phenomena at a smaller length-scale relates to properties and behavior at a longer length-scale, from the molecular and active aggregates-scales up to the production-scales (i.e. the design of a refinery or of a cement or phosphate production complex from the Schrödinger's equations...).

The success of this integrated multi scale approach for process innovation (the 3rd paradigm of chemical engineering) is mainly due to the considerable developments in the analytical scientific techniques coupled with image processing, in the powerful computational tools and capabilities (clusters, supercomputers, cloud computers, graphic processing units, numerical codes parallelization etc.) and in the development and application of descriptive models of steady state and dynamic behaviour of the objects at the scale of interest.

This modern scientific multiscale approach of chemical engineering *"the green approach of process engineering"* that combines both market pull and technology push is strongly oriented on process intensification and on the couple green products/green processes *"to produce much more and better in using much less"*, and to sustainably produce molecules and products responding to environmental and economic challenges, with the help of technical innovation and sustainable technologies for efficient mass and energy utilization and for a better quality of life:

This modern green approach of chemical and process engineering will concern the eco-efficient **"Factory of Future"**.

-DANIEL MANOGARAN D
(IV CHEMICAL)

GREEN COAL REPRESENTS A CLEAN AND SAFE ALTERNATIVE ENERGY CHOICE FOR TRADITIONAL MINED COAL

Green coal represents a clean and safe alternative energy choice and is readily available to traditional coal furnaces without modification. Green Coal related to Green Engineering concept that to protect human health and the environment without economic viability and efficiency.

Green Engineering is the design, commercialization, and use of processes and products in a way that reduces pollution, promotes sustainability, and minimizes risk to human health and the environment without sacrificing economic viability and efficiency.

One of the best idea for Green engineering is Green coal. Because Green coal offers a simple, clean and very efficient alternative to traditionally mined coal. It also offers a safer choice through its 100% organic ingredients with benefits to our health as well as to the environment. Bio charcoal produced from plant matter and stored in the soil as a means of removing carbon dioxide from the atmosphere.

Any biomass waste from wood to peanut shells to releases carbon as it decomposes. But it can be burned in a kiln by pyrolysis (an airless burning technique) to create biochar, also known by the soubriquet green coal. Biochar appears to lock carbon in for much longer than other forms or sequestration: a plant or tree will only sequester for 15 to 20 years.

When replacing fuel types for your energy source a primary consideration is the time and expense involved upgrading all the equipment to make the change. Switching to Green Coal is made simple considering its immediate compatibility with furnace system used for traditional coal, with no significant upgrading or changes required.

Depending on your requirements our product comes in two forms, powder, and grain.

With our Green Coal offering such impressive caloric values together with the simplicity and cost-effective approach in switching fuel types, We hope you agree this represents a wise alternative energy and worth your consideration.

Green Coal Benefits

- Clean Alternative to Traditional Coal
- High Calorific Value
- Comes in Various Sizes
- Immediately Available to Coal Furnaces
- Comes from Sustainable Source
- Safer for Health
- Environmentally Friendly

-J.ARUN KUMAR
(IV CHEMICAL)

GREEN COMPUTING

Green computing refers to practice of reducing the energy consumption and also reducing the carbon footprint in the environment . This is achieved by replacing the components of the computer by green materials which reduce the carbon footprint . Green computing has been increasingly implemented from small scale industries to big companies. Carbon footprint is defined as emission of green house gases by an person , product , industry etc . This not only leads to decreased performance of computers but also leads to a major problem that is increased in earth's temperature .

Steps that can be taken to reduce carbon footprint are Sustainable green computing plan, Reduce Paper consumption, Conserve energy , Recycling. Future of Green computing is Recyclable paper laptops which are made by paper which are recycled and are generally in packed in layers.

IMEC laptop which uses renewable source of energy.

Computers account for nearly 5% of the carbon emissions of the world. Green computing is said to be the best way to reduce this effect. Green computing is said to silence the debate between the need for the earth or need for the technology.

- SARAN KUMAR. M
(IV CHEMICAL)

GREEN ENGINEERING FOR A HEALTHIER LIFE

Green engineering is the design, commercialization, and use of processes and products in a way that reduces pollution, promotes sustainability, and minimizes risk to human health and the environment without sacrificing economic viability and efficiency. Green engineering is a new idea to reduce the use of harmful chemicals and replace those chemicals with safe chemicals which would also be environmental friendly.

Green Engineering finds application in day to day life like Green Dry Cleaning of Clothes Perchloroethylene (PERC), $\text{Cl}_2\text{C}=\text{CCl}_2$ is commonly being used as a solvent for dry cleaning. It is now known that PERC contaminates ground water and is a suspected carcinogen. A technology, known as Micell technology makes use of liquid CO_2 and a surfactant for dry cleaning clothes, thereby replacing PERC. Dry cleaning machines have now been developed using this technique. Micell Technology has also evolved a metal cleaning system that uses CO_2 and a surfactant thereby eliminating the need of halogenated solvents.

Green Solution was developed to turn turbid water clear. Tamarind seed kernel powder, discarded as agriculture waste, is an effective agent to make municipal and industrial waste water clear. The present practice is to use Al-salt to treat such water has been found that alum increases toxic ions in treated water and could cause diseases like Alzheimer's. On the other hand kernel powder is not-toxic and is biodegradable and cost effective. For the

study, four flocculants namely tamarind seed kernel powder, mix of the powder and starch, starch and alum were employed. Flocculants with slurries were prepared by mixing measured amount of clay and water. The result showed aggregation of the powder and suspended particles were more porous and allowed water to ooze out and become compact more easily and formed larger volume of clear water. Starch flocks on the other hand were found to be light weight and less porous and therefore didn't allow water to pass through it easily. The study establishes the powder's potential as an economic flocculants with performance close more established flocculants such as $K_2SO_4Al_2(SO_4)_3 \cdot 24H_2O$ (potash alum).

-UDITH KIRAN.A
(IV CHEMICAL)

DIRECT TRANSESTERIFICATION OF SPENT COFFEE GROUNDS FOR BIODIESEL PRODUCTION

The continued use of fossil fuels for centuries worldwide depletes the finite supply and raises concerns over greenhouse gasses (GHGs) and exhaust emissions. As a result, the demand for biodiesel as an alternative to petroleum diesel in the United States has increased significantly. As reported by the United States Environmental Protection Agency (U.S. EPA), the use of B20 (20% biodiesel blended with 80% of petroleum diesel by volume) can decrease particulate matter emission by approximately 10.1% in comparison with that from 100% petroleum diesel. In addition, the emission of carbon monoxide and hydrocarbons can decrease 21.1% and 11.0%, respectively. In recent years, there has been increased interest to produce biodiesel out of spent coffee grounds (SCGs) as a sustainable practice for waste reduction. Coffee is the second largest traded commodity worldwide, and the world's coffee production in 2016/2017 is estimated at 9.34 million tons based on the USDA's report.

Studies of spent coffee grounds (SCGs) as a potential biodiesel feedstock in recent years mostly started from solvent extraction to obtain coffee oil, and then converted it into coffee biodiesel in two steps, acid esterification followed by alkaline transesterification. This paper presents a direct transesterification (in situ) method that produces biodiesel from SCGs without the need for oil extraction and esterification steps. Prior to the direct transesterification, SCGs were impregnated with sulfuric acid as the catalyst for subsequent direct transesterification, and moisture was removed from the impregnated SCGs.

To verify it, the scientists collected spent coffee grounds from a multinational coffeehouse chain and separated the oil. They then used an inexpensive process to convert 100 percent of the oil into biodiesel. The resulting coffee-based fuel — which actually smells like java — had a major advantage in being more stable than traditional biodiesel due to coffee's high antioxidant content, the researchers say. Solids left over from the conversion can be converted to ethanol or used as compost, the report notes. The scientists estimate that the process could make a profit of more than \$8 million a year in the U.S. alone. They plan to develop a small pilot plant to produce and test the experimental fuel within the next six to eight months.

Biodiesel is a growing market. Estimates suggest that annual global production of biodiesel will hit the 3 billion gallon mark by 2010. The fuel can be made from soybean oil, palm oil, peanut oil, and other vegetable oils; animal fat; and even cooking oil recycled from restaurant French fry makers. Biodiesel also can be added to regular diesel fuel. It also can be a stand-alone fuel, used by itself as an alternative fuel for diesel engines.

- SHANKARA NARAYANAN.B
(IV CHEMICAL)

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