

**Sri Venkateswara College of Engineering**  
(Approved by the A.I.C.T.E., Accredited by NAAC and  
Affiliated to Anna University Chennai)  
Post Bag No.01, Pennalur, Irungattukottai- 602 117.  
Sriperumbudur Taluk, Tamil Nadu India.  
Phone : 91-44-27152000 (20 Lines) Ext 550  
27163783 / 27163784 / 27107016  
Fax : 91-44- 27162462 / 27162494



Email : principal@svce.ac.in  
URL : http://www.svce.ac.in  
Grams: SVEC, Sriperumbudur  
Mobile: +91 9894145914



**Prof.M.Sivanandham, Ph.D.,**  
**PRINCIPAL**

Ref: SVCE / A1/ 2013-13 dated

27<sup>th</sup> June 2013

To

National Assessment and Accreditation Council  
Nagarbhavi  
Bangalore – 5600 072  
Karnataka

Sir

Sub : Cycle 2 Accreditation – Track Id TNCOGN13672 – Submission of  
SSR- reg

With reference to the subject, the college submitted the LOI on 12<sup>th</sup> Feb 2013.  
Herewith, I submit the Self Study Report (SSR) for your perusal.

Thanking you

Yours Sincerely

(M. Sivanandham)

## SELF-STUDY REPORT (SSR)

### CONTENTS

	<b>Page No</b>
<b>Part A</b> Covering letter from the Head of the Institution	1
<b>Part B</b> Executive Summary- The SWOC analysis of the Institution	4
Abbreviations	9
<b>Part C</b> Profile of the Institution	10
<b>Part D</b> CRITERION-WISE ANALYTICAL REPORTS	
<b>Criterion I</b> Curricular Aspects	
1.1 Curriculum Planning and Implementation	22
1.2 Academic flexibility	27
1.3 Curriculum Enrichment	34
1.4 Feedback System	37
<b>Criterion II</b> Teaching-Learning and Evaluation	
2.1 Student Enrolment and Profile	39
2.2 Catering to Student Diversity	49
2.3 Teaching learning process	51
2.4 Teacher quality	57
2.5 Evaluation process and reforms	63
2.6 Student performance and Learning Outcomes	67
<b>Criterion III</b> Research Consultancy and Extension	
3.1 Promotion of research	70
3.2 Resource Mobilization for Research	91
3.3 Research Facilities	97
3.4 Research Publication and Awards	102
3.5 Consultancy	110
3.6 Extension Activities and Institutional Social	112

	Responsibility (ISR)	
3.7	Collaboration	116
<b>Criterion IV</b>	<b>Infrastructure and Learning Resources</b>	
4.1	Physical facilities	121
4.2	Library as a Learning Resource	129
4.3	IT Infrastructure	134
4.4	Maintenance of Campus Facilities	137
<b>Criterion V</b>	<b>Student Support and Progression</b>	
5.1	Student Mentoring and Support	140
5.2	Student Progression	151
5.3	Student Participation and Activities	154
<b>Criterion VI</b>	<b>Governance and Leadership and Management</b>	
6.1	Institutional Vision and Leadership	157
6.2	Strategy Development and Deployment	163
6.3	Faculty Empowerment Strategies	167
6.4	Financial Management and Resources Mobilization	170
6.5	Internal Quality Assurance System (IQAS)	172
<b>Criterion VII</b>	<b>Innovations And Best Practices</b>	
7.1	Environment Consciousness	174
7.2	Innovations introduced during the last four years	176
7.3	Two best practices	177
<b>Part E</b>	<b>DECLARATION BY THE HEAD OF THE INSTITUTION</b>	
	UGC 2f and 12b order	
	Minority Status order	
	AICTE approval (academic year 2013 -14)	
	Previous NAAC accreditation certificate & peer team report	

## **PART B: Executive Summary – The SWOC analysis of the Institute.**

Sri Venkateswara College of Engineering (SVCE), a self-financing college approved by the AICTE, New Delhi and affiliated with Anna University-Chennai, is located in the industrial town Sriperumbudur that has close proximity to Chennai, Tamil Nadu. The College started with three branches of undergraduate courses twenty-eight years ago, and has grown to a multi-disciplinary institution with ten UG and ten PG Courses, and many PhD programmes. Importantly, with the direction from the well-known industrialist, Dr. A.C. Muthiah, Chairman, Governing Council of SVCE (Chairman Emeritus, Southern Petrochemical Industries Corporation, Chennai), and renowned industrialists and educationalists as members in the College Governing Council, the growth of the College has been well planned to excel and aimed to meet the specific needs of our industry and the growing academic interests of the student community.

The strategic planning to improve the quality of education and Research & Development and Innovation using various objectives is based on the Strength Weakness Opportunities and Challenges (SWOC) Analysis. The SWOC analysis was performed in a population of all the stakeholders such as students, parents, teachers, personnel in the administration, and human resource personnel from the industries. Moreover, alumni, external peer groups of the various faculties in the University Inspection teams, AICTE – NBA inspection teams, and UGC inspection teams have provided SWOC analyses. These analyses highlighted similar attributes as the strengths in curricular, co-curricular and extracurricular areas in the undergraduate educational system of the College. Specifically, the attributes like 80-90% graduation rate with approximately 50% having distinction, >95% placement for all the eligible graduating students and more than 50% students, who have opted to go for higher education programme, enroll in foreign universities reflect the existence of a high-quality undergraduate programme in the SVCE. These are the unique selling points of the College, also. These characteristics of this College have aligned with the mission of the College, which states “offering excellent engineering education to men and women at undergraduate and post-graduate levels”.

### **SWOC Analysis**

The SWOC matrix was defined with certain parameters. The following are the Key findings from the SWOC analysis on Strengths, Weaknesses, Opportunities and Challenges.

## **STRENGTHS**

### **GENERAL:**

1. The College, which is 28 years old, has secured a good image in the public. It is the most sought private engineering college in this region, by the students and parents.
2. The college is situated in a spacious 95 acre campus, in the Industrial hub of Sriperumbudur.
3. Dr. A.C.Muthiah, a renowned engineer, industrialist and philanthropist is the chairman of the Governing Council.
4. The institution has got excellent infrastructure for graduate and undergraduate programmes.
5. The college has 12 Mbps internet connectivity and a professionally designed website ([www.svce.ac.in](http://www.svce.ac.in)).

### **ACADEMICS:**

6. More than 80% of students graduate every year, on a consistent basis.
7. Our students consistently secure University ranks (about 60 students on an average, every year are placed in the top 50 university ranks).
8. Additional topics, beyond syllabus are covered by the teachers.
9. College works for 6 days in a week, in a staggered manner, so that the students and faculty get an extra day for special coaching, research and other professional development activities
10. The college recognizes and appreciates top academic performers in each class in the internal evaluation and University examinations.
11. The college has set up sixteen smart classrooms and is in the process of converting every class room to a smart class room.
12. The junior teachers are trained in pedagogy through the Centre for Innovative Teaching Methods, headed by a Dean.
13. Faculty exchange programmes with foreign universities are in vogue.

### **FACULTY MEMBERS:**

14. The faculty members are an ideal blend of youth and experience, 21% of faculty members are PhD holders. All are highly motivated.
15. The faculty retention is excellent. They are given full academic freedom.
16. Responsibilities and authorities are delegated to HODs and Deans, which have resulted in a transparent management.

**RESEARCH:**

17. College sponsors faculty for PhD and Post-doctoral research.
18. College sponsors faculty and students for their overseas trips to present research papers in international conferences.
19. Incentives and rewards are given for research paper publications in national and international journals.
20. Almost all eligible departments have been recognized as Research Centres by Anna University Chennai.
21. Many members of our faculty have been recognized as the PhD/MS by research guides by the Anna University, Chennai.
22. Funded research projects to the tune of 113.72 lakhs from AICTE, DRDO, DST have been obtained.

**ACCREDITATION:**

23. The college is ISO 9001:2008 certified.
24. Most of the UG courses are accredited by the NBA.
25. Eight UG courses have been given permanent affiliation by the Anna University.
26. Marine Engineering course is approved by the DG shipping and it is 100 % residential

**STUDENT CENTRIC:**

27. Five percent of tuition income is distributed as scholarships/tuition fee waiver to students.
28. Corpus fund is used for providing assistance to students for purchasing books and instruments.
29. Personality and professional development of students are given importance in the students' Evaluation processes.
30. Students are good at organizational capabilities.
31. Students are actively counseled by the faculty advisors. One faculty advisor is nominated for every 20 students.
32. Students give feedback on teachers.

33. Hostel facility to accommodate 576 men and 186 women students is available. (184 each for men and women hostel are under construction) additionally.
34. Excellent placement record - More than 90 % of eligible undergraduate students get placed every year in leading companies.
35. More than 50 % of eligible students pursue higher education overseas, after getting qualified through GRE, TOEFL.
36. Presence of a strong alumni base - alumni support the college by way of giving scholarships, guiding the students, Industry Institute Interaction, etc.
37. The teachers from the department of Humanities and Social Sciences conduct special coaching classes at the language laboratory to improve the soft skills and employability of students.
38. Parents' meets are organized once in a semester to take their feedback and take corrective actions.
39. Twenty-four hours medical care is available in the College.
40. The college houses a indoor sports complex having gymnasium, TT, Basket ball etc.,

#### **INTERACTION WITH INDUSTRY:**

41. The college has entered into MoUs with leading industries, which are being pursued actively. The list is exhaustive Examples: -----
42. An active Entrepreneurship Development Cell is headed by a senior Professor to mould the students to become entrepreneurs.

#### **WEAKNESSES**

1. Industry Institution Interaction needs to be strengthened further.
2. Faculty with industrial experience are less in number.
3. Communication skill of  $\approx$  15% students needs to be improved.
4. Library to be expanded to cater to growing research needs.
5. The College is affiliated to the Anna University and hence have limitation in upgrading by curriculum.
6. Consultancy and extension activities need improvement.
7. No technology incubators to transfer the technology to industries.
8. GATE-qualified students are not joining our PG courses, due to lack of assistance ship

## **OPPORTUNITIES**

1. Situated near Sriperumbudur, where the multinational companies have set up their industries. Also, the area is a hub for the automobile, electronics and other industries.
2. The technology is developing at a rapid rate. Robotics, Mechatronics including Nanotechnology, cloud computing, 3G in mobile communication construction Management are the recent technological advances to name a few.
3. The students have become more demanding. The students have a large potential, which can be honed.
4. The interdisciplinary research in niche areas is the need of the day, which give opportunity in all areas.
5. As the faculty members are being paid a higher pay as per the 6<sup>th</sup> pay commission, faculty retention is better.
6. Student exchange programmes with premier institutions in India and foreign universities are possible.

## **CHALLENGES**

1. Changing Social and economical scenario leading to unpredictable future.
2. Coping with rapid changing in technology and the industrial requirements to improve the employability of the students are the biggest challenge for an Institution affiliated to an University.
3. Declining supply of quality faculty, doctorates as well as exposing the teaching faculty to the Industrial scenario and get them trained in an industry is another challenge.
4. Unpredictable and declining quality of students may exert pressure on the teachers.

The above lists give a comprehensive list of the SWOC analysis of the college.



## ABBREVIATIONS

### Departments

Automobile Engineering	:	AE
Biotechnology	:	BT
Chemical Engineering	:	CH
Civil Engineering	:	CE
Computer Science & Engineering	:	CS
Electrical & Electronics Engineering	:	EE
Electronics & Communication Engineering	:	EC
Information Technology	:	IT
Marine Engineering	:	MR
Mechanical engineering	:	ME
Master of Computer Applications	:	CA
Applied Chemistry	:	AC
Applied Mathematics	:	AM
Applied Physics	:	AP
Humanities and Social Sciences	:	HS

**PART C. Profile of the Affiliated College**

1. Name and address of the college:

Name	:	<b>Sri Venkateswara College of Engineering</b>
Address	:	<b>Post Bag No.3, Pennalur,</b>
City	:	<b>Sriperumbudur</b>
District	:	<b>Kancheepuram</b>
State	:	<b>Tamil Nadu</b>
Pin code	:	<b>602 105</b>
Website	:	<b>www.svce.ac.in</b>

2. For communication:

Designation	Telephone with STD code	Mobile	Fax	Email
Principal Prof. M. Sivanandham	O: 044- 27152222	0- 9894145914	044- 27162462 044- 27162494	principal@ svce.ac.in
Vice Principal Prof. R.Parthiban	O: 044- 27125000 Extn No.550	0- 9884355504	044- 27162462 044- 27162494	parthi@ svce.ac.in
Steering Committee Co-ordinator Prof. S. Krishnan	O:044- 27152000 Extn No.502	0- 9994952762	044- 27162462 044- 27162494	skrishnan @svce.ac.in

3. Status of the of Institution :

Affiliated College

Constituent College

Any other (specify)

✓

4. Type of Institution:

a. By Gender

i.For Men

ii. For Women

iii. Co-education

✓

b By shift

i Regular

ii. Day

iii. Evening

✓

5. Is it a recognized minority institution?

Yes

No

✓

If yes specify the minority status (Religious/linguistic/ any other) and provide documentary evidence.

Linguistic minority (document enclosed)

6. Source of funding:

Government

Grant-in-aid

Self-financing

✓

7. a. Date of establishment of the college: **01.07.1985**

b. University to which the college is affiliated /or which governs the college  
(If it is a constituent college)

Anna University, Chennai 25

c. Details of UGC recognition:

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (If any)
i. 2 (f)	16/03/2007	
ii. 12 (B)	18/08/2011	

(Enclose the Certificate of recognition u/s 2 (f) and 12 (B) of the UGC Act)

d. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

<b>Under Section/ clause</b>	<b>Recognition/Approval details Institution/Department/ Programme</b>	<b>Day, Month and Year (dd-mm-yyyy)</b>	<b>Validity</b>	<b>Remarks</b>	
i. AICTE Act Sec (10) k	<b>Engineering &amp; Technology</b>	19.03.2013	2013-14		
	B.E. Mechanical Engineering				
	B.E. Electronics and Communication Engineering				
	B.E. Computer Science and Engineering				
	B.E. Electrical and Electronics Engineering				
	B.Tech. Chemical Engineering				
	B.Tech. Information Technology				
	B.E. Marine Engineering				
	B.E. Automobile Engineering				
	B.Tech. Biotechnology				
	B.E. Civil Engineering				
	M.E. Communication Systems.				
	M.E. Power Electronics & Drives				
	M.E. Computer Science & Engg.				
	M.E. Computer & Communication				
	M.E. Computer Aided Design				
	M.E. Internal Combustion Engineering				
	M.E. Applied Electronics				
	M.Tech. Biotechnology				
	M.Tech. Chemical Engineering				
	M.E. Mechtronics*				* affiliation from Anna University is awaited to commence the course from the academic year 2013-14
	M.Tech. Petroleum & Refining & Petrochemicals*				
<b>MCA</b>	19.03.2013	2013-14			

(recognition/approval letter enclosed)

8. Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?

Yes  No

If yes, has the College applied for availing the autonomous status?

Yes  No

9. Is the college recognized

a. by UGC as a College with Potential for Excellence (CPE)?

Yes  No

b. for its performance by any other governmental agency?

Yes  No

10. Location of the campus and area in sq.mts:

Location *	Rural
Campus area in sq. mts.	93.60 Acres / 378799.2 sq.mts
Built up area in sq. mts.	56000 sq. mts

(\* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.

✓ Auditorium/seminar complex with infrastructural facilities:

3500 sq m available (Ground and first floor) with a seating capacity of 1500 and with all amenities

✓ Sports facilities

✓ play ground:

(i) outdoor games:

1) Cricket Field a) Turf      b) Matting, Two cricket nets for practice

2) Football Ground – 1 No.

3) Hockey Field – 1 No.

- 4) Tennis Court – 2 Nos.
- 5) Volley Ball Court – 2 Nos.
- 6) Basket Ball Court – 1 No.
- 7) Ball Badminton Court – 2 Nos.
- 8) Handball Court – 1 No.
- 9) Throw Ball Court – 1 No.

(ii) indoor games:

- 1) Table Tennis
- 2) Chess
- 3) Carrom

✓ swimming pool : A deep pool available

✓ gymnasium

Gym Equipments:

- 1) Peck Deck – 1 No.
- 2) Wall Pulley – 1 No.
- 3) Abdominal Bench – 1 No.
- 4) Leg Extension Bench & Leg Curl– 1 No.
- 5) Hyper Extension Bench – 1 No.
- 6) Twister – 1 No.
- 7) Stepper – 1 No.
- 8) Cycle – 1 No.
- 9) Tread mill – 1 No.
- 10) Sportop Right Exercycle
- 11) Fore Arm – 1 No
- 12) Peach Curl – 1 No.
- 13) Z-Rod – 1 No.
- 14) Body Solid – 3000 Lps  
Multistation Equipment – 1 No.
- 15) Dumbells - 2 Nos.
- 16) Weight Plates – 36 Nos.
- 17) Smith Machine – 1 No.

✓ Hostel

\* Boys' hostel

- i. Number of hostels: 6 Blocks (each 96 seater)
- ii. Number of inmates: 576
- iii. Facilities (mention available facilities): Wifi Connection, Newspaper, Television, Common room.

- \* Girls' hostel
  - i. Number of hostels: 2 Blocks (each 96 seater)
  - ii. Number of inmates: 186
  - iii. Facilities (mention available facilities): Wifi Connection, Newspaper, Television, Common room.
- \* Working women's hostel – Nil
  - i. Number of inmates
  - ii. Facilities (mention available facilities)
- ✓ Residential facilities for teaching and non-teaching staff (give numbers available -- cadre wise)
  - Faculty: 6
  - Non-teaching: 4
- ✓ Cafeteria
- ✓ Health centre – Full time Medical Officer, Lab Technician, Staff Nurse,  
First aid, Inpatient, Outpatient, Emergency care facility,  
Ambulance available (24x7)  
Health centre staff –
  - Qualified doctor    Full time     Part-time
  - Qualified Nurse    Full time     Part-time
- ✓ Indian Bank, Sriperumbudur Branch is functioning in the campus as an Extension Counter.
- ✓ Transport facilities to cater to the needs of students and staff: 55 buses are available to commute students & staff.
- ✓ Animal house
- ✓ Biological waste disposal
- ✓ Generator or other facility for management/regulation of electricity and voltage
- ✓ Solid waste management facility
- ✓ Waste water management Water harvesting

**12. Details of programmes offered by the college (Give data for current academic year)**

Sl. No.	Programme Level	Name of the Programme/ Course	Duration	Entry Qualification	Medium of instruction	Sanctioned Student Strength	No. of students admitted
I	Under - graduate	B.E. - ME	4 years	Plus Two or Equivalent examination	English	120	126
		B.E. – EC				180	183
		B.E. CS				180	188
		B.E. EE				120	121
		B.Tech. CH				90	88
		B.Tech. IT				120	118
		B.E. MR				30	27
		B.E. AE				60	63
		B.Tech. BT				60	51
		B.E. CE				30	30
ii	Post-graduate	MCA	3 years	Any degree with Maths at 10+2	English	60	54
		M.E. Communication Systems.	2 years	UG Engineering Degree or equivalent examination	English	25	25
		M.E. Power Electronics & Drives				25	21
		M.E. - CS				25	23
		M.E.- Computer & Communication				18	16
		M.E. Computer Aided Design				18	14
		M.E. Internal Combustion Engineering				18	16
		M.E. Applied Electronics				18	18
		M.Tech. BT				18	17
		M.Tech. CH				18	8
iv	Ph. D.	Dept. ME					
		Dept. EE					1
		Dept. IT					2
		Dept. BT					4
		Dept. AM					2
		Dept. AC					5
v	M.Phil., Certificate courses, UG Diploma, PG Diploma - ---I						



13. Does the college offer self-financed Programmes?

✓ Yes  No

If yes, how many?

20

14. New programmes introduced in the college during the last five years if any?

Yes	✓	No
-----	---	----

Number	5
--------	---

It is proposed to commence 2 PG degree courses namely,

1) M.E. Mechatronics

2) M.Tech. Petroleum Refining & Petrochemicals

from the academic year 2013-14.

15. List the departments: (respond if applicable only and do not list facilities like Library, Physical Education as departments, unless they are also offering academic degree awarding programmes. Similarly, do not list the departments offering common compulsory subjects for all the programmes like English, regional languages etc.)

Particulars	UG	PG	Research
Science	---	---	---
Arts	---	---	---
Commerce	---	---	---
Any other not covered above	---	---	---
Department of Mechanical Engineering	✓	✓	✓
Department of Electronics and Communication Engg	✓	✓	✓
Department of Computer Science and Engineering	✓	✓	✓
Department of Electrical and Electronics Engineering	✓	✓	✓
Department of Chemical Engineering	✓	✓	✓
Department of Information Technology	✓	✓	✓
Department of Marine Engineering	✓	---	---
Department of Automobile Engineering	✓	---	---
Department of Biotechnology	✓	✓	✓
Department of Civil Engineering	✓	---	---
Department of Computer Applications	---	✓	---

16. Number of Programmes offered under (Programme means a degree course like BA, BSc,MA,M.Com...)

a. annual system	Nil
b. semester system	20
c. trimester system	Nil

17. Number of Programmes with

a. Choice Based Credit System	NA
b. Inter/Multidisciplinary Approach	NA
c. Any other ( specify and provide details)	NA

18. Does the college offer UG and/or PG programmes in Teacher Education?

Yes  No

19. Does the college offer UG or PG programme in Physical Education?

Yes  No

20. Number of teaching and non-teaching positions in the Institution

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor		*M	*F	*M	*F
	*M	*F	*M	*F	*M	*F				
Sanctioned by the Management/society or other authorized bodies										
<i>Recruited</i>										
Engineering & Technology	25	5	23	9	96	103	8	6	69	3
Computer Applications	1	1	3	0	2	6	1	0	2	0
Non Engineering - I Year	6	0	0	1	17	18	80	4	6	0

**\*M-Male \*F-Female**

21. Qualifications of the teaching staff:

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
<b>Permanent Teachers</b>							
<b>Engineering &amp; Technology</b>							
Ph.D	21	5	9	1	9	2	47
ME/M.Tech/MS	1	0	14	8	86	98	207
B.E/B.Tech	3	0	0	0	1	3	7
<b>Computer Applications</b>							
Ph.D	0	1	0	0	0	0	1
ME/M.Tech/MS	1	0	3	0	2	2	8
B.E/B.Tech	0	0	0	0	0	4	4
<b>Non Engineering</b>							
Ph.D	6	0	0	1	12	3	22
M.Phil	0	0	0	0	5	12	17

22. Number of Visiting Faculty /Guest Faculty engaged with the College.

1
---

23. Furnish the number of the students admitted to the college during the last four academic years.

Categories	Year 1		Year 2		Year 3		Year 4	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	53	27	68	26	73	37	59	41
ST	2	0	3	1	7	11	2	4
OBC	362	117	460	148	515	194	473	249
General	191	93	214	79	214	110	259	120
Others	0	0	0	0	0	0	0	0

24. Details on students enrollment in the college during the current academic year:

Type of students	UG	PG	M. Phil.	Ph.D.	Total
Students from the same state where the college is located	952	208	--	17	1177
Students from other states of India	42	4	--	--	46
NRI students	1	-	--	--	1
Foreign students	-	-	--	--	
Total	995	212		17	1224

25. Dropout rate in UG and PG (average of the last two batches)

UG

PG

26. Unit Cost of Education

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled )

(a) including the salary component

(b) excluding the salary component

27. Does the college offer any programme/s in distance education mode (DEP)?

Yes

No

If yes,

a) is it a registered centre for offering distance education programmes of another University

Yes  No

b) Name of the University which has granted such registration.

c) Number of programmes offered

d) Programmes carry the recognition of the Distance Education Council.

Yes  No

28. Provide Teacher-student ratio for each of the programme/course offered:

UG : Engineering & Technology = 1:15  
P.G. : Engineering & Technology = 1 : 12  
MCA = 1: 15

29. Is the college applying for Accreditation :

Cycle 1  Cycle 2  Re-Assessment:

30. Date of accreditation\* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

Cycle 1: (16/09/2008)

Accreditation Outcome/Result: **CGPA of 2.93 on four point scale at B Grade**

31. Number of working days during the last academic year.

2011-12	
ODD	110 days
EVEN	110 days

32. Number of teaching days during the last academic year

*(Teaching days means days on which lectures were engaged excluding the examination days)*

2011-12	
ODD	78 days (78 × 7 periods)
EVEN	80 days (80 × 7 periods)

33. Date of establishment of Internal Quality Assurance Cell (IQAC)

IQAC ..... (08/03/2009)

34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC.

AQAR (i) ..... (August 2010)

AQAR (ii) ..... (July 2011)

35. Any other relevant data (not covered above) the college would like to include. (Do not include explanatory/descriptive information)

Not applicable

## **PART D. CRITERIA-WISE ANALYTICAL REPORTS**

### **CRITERION I : CURRICULAR ASPECTS**

#### **1.1 CURRICULUM PLANNING AND IMPLEMENTATION**

##### **1.1.1 State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.**

**Vision:** *“To be a leader in higher technical education and research by providing the state of art facilities to transform the learners into global contributors and achievers”*

**Mission:** *“To develop SVCE into a centre of excellence offering engineering education to men and women at undergraduate and post-graduate degree levels bringing out their total personality, emphasizing ethical values and growing challenges of the industry and diverse societal needs of the nation”*

**Objectives:** The institution consistently strives to enhance the standards of its students and staff. In order to achieve this, the institution has set for itself the following five objectives as laid out in the ISO 9001:2008

- (i) Academic Objective
- (ii) Employment Objective
- (iii) Research Objective
- (iv) Industry Objective
- (v) Professional Objective

The vision and mission statements are displayed in the college website, college calendar, and also in the entrance area. In addition, all the departments have displayed the vision and mission statements in the various buildings they occupy in the campus. Further the brochures of the various Faculty Development Programmes and the workshops/conferences organized by the various departments of the college thus enabling the vision and mission statements to have a wide coverage.

The cells of the various quality objectives are headed by senior faculty members who are ably assisted by faculty members from all departments of the college. The objective leaders along with their team members interact with the relevant stakeholders periodically and disseminate information to the staff through the department representatives in that cell. The students are informed periodically about these objectives by their class counselors during the counseling sessions they have every month and also during the class committee meeting held twice a semester. The parents are informed at the very beginning to their wards' entry into the college and also repeatedly reminded of the same by the faculty during the Parent Teacher meet that is held every semester.

**1.1.2 How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).**

The institution has developed and practices its extensive action plan for effective implementation of the curriculum through the following measures:

Prior to the commencement of classes, individual lesson plans are prepared for each subject that is offered during the semester. Lecture notes are also prepared in advance and senior faculty contribute by rendering advice to the faculty about the notes, problems etc. The Lesson Plans are posted on the college website.

Further, if a subject is common to more than one branch or if more than one faculty handle a particular subject, then a course coordinator is nominated for the same; the course coordinator conducts a meeting with all the faculty handling the subject to deliberate the mode of teaching, discuss the worksheets to be given to the students and to fix the portions for each Continuous Assessment Test.

As far as laboratory classes are concerned, in addition to the lesson plan, lab manuals are prepared for each subject and distributed to the students. A model exam is conducted for the students in their practical classes half-way through the semester.

Further, in order to get a real time exposure to the industries and their requirements, the Industry Institute Interaction Cell (IIIC) of the college meets often to discuss the latest developments in the industry and this in turn is conveyed to the students to make them more industry-ready. Also, industrial visits are arranged every semester for the students so that they are exposed to industry. Some of the students also go for in-plant training. For example, the Department of Chemical Engineering arranges 6-8 Industrial visits every academic year, encourages and supports the students in undergoing In-plant training in industries in the vacation, supports the students in obtaining Industrial projects and internships with stipend in various institutes/ research organizations.

**1.1.3 What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?**

At the University level, Faculty Development Training Programmes (FDTP) are conducted in various subjects to enable teachers to effectively translate the curriculum in such a manner that the students will readily grasp the finer points in addition to the routines of the subject.

The college in turn sponsors its faculty members to attend these FDTP programmes conducted by Anna University.

Further, the college itself with sponsorship from Anna University conducts FDP for various subjects to benefit faculty not only from its institute, but also from other institutes. Also faculty members are sponsored to attend seminars, workshops, guest lectures and special training in teaching methodologies. Senior faculty members are encouraged to visit junior faculty classes to offer appropriate suggestions. This ultimately enhances the teaching methodologies adopted by the faculty members and results in effective translation of the curriculum.

Also, in order to experience the practical applications of the theory learnt, students are taken for an industrial visit every semester. Moreover, practical classes are updated beyond the syllabus, so that whatever is learnt by the student is tangible and not abstract and widens the students' practical knowledge in that specific area of study.

For example, the department of Civil engineering arranges for its faculty to take its students to any industry or site to impart an idea on practical applications of the subject. The Chemical Engineering department conducts 4 extra experiments beyond the syllabus for the students in the laboratory and 2 experiments are demonstrated apart from the minimum number of 10 experiments prescribed by the university.

Moreover, modern teaching facilities like smart class rooms, video/audio facilities, technical video resources (video CDs, DVDs) are utilized for an effective delivery of the subject material to the students.

#### **1.1.4 Specify the initiatives taken up or contribution made by the institution for effective curriculum delivery and transaction on the Curriculum provided by the affiliating University or other Statutory agency.**

The institution encourages the conduct of and participation in AICTE/DAE (refer Evaluation Report ) sponsored summer/winter schools to enable faculty to correlate the various aspects of the curriculum and present the same in a concise manner to the students.

Further, the institute encourages Visiting Faculty Programmes, Faculty Exchange Programmes etc., to enrich the knowledge of the teachers so that it may be passed on to the students. Also MOU are signed with industries and universities to enable effective dissemination of knowledge.

For example, MOU was signed with London South Bank University (LSBU) and Dr.N.Meyyappan, Professor, Department of Chemical Engineering had a stint in LSBU under the faculty exchange programme. Also, three final year students of the Civil Engineering department have been accepted by Ms Technip (I) Ltd., for internship. Further, the Cognizant Technology Solutions Ltd, Chennai has sponsored the establishment of the Computational



Biotechnology Laboratory for improving the academic performance of the students and also help them in research. The Biotechnology department has also established collaboration with the Institute of Plasma Research, Ahmedabad and SPIC Pharma on improving the antibiotic producing strains.

**1.1.5 How does the institution network and interact with beneficiaries such as industry, research bodies and the university in effective operationalisation of the curriculum?**

The college interacts with various industries fundamentally through its Industry Institute Interaction Cell (IIIC) which serves as a forum for interaction between the experts from industries and faculty members.

Also, the college arranges industrial visits of students to industries, so that, the students apart from experiencing the application of the theory studied by them, also learn the requirement that the various industries expect from them.

Further, the placement cell of the college is in continuous contact with various industries and provides a platform for interaction among both students and industry.

The college apart from financing in-house projects (Bio-Mass) also actively encourages its faculty to apply/obtain funded projects from various bodies such as AICTE, DRDO, DST etc (Refer Criteria III). This facilitates a constant interaction between research bodies and the college, and also, the students are given a exposure to the scope of the syllabus studied by them in terms of research applications, patents, etc.,

Many of the departments in the college are recognized centres of Research (Refer Criteria III) and hence there is a continuous interaction between the faculty members of the institute and the university. Hence, there is always a mutual exchange of information, discussion regarding curriculum etc.

**1.1.6 What are the contributions of the institution and/or its staff members to the development of the curriculum by the University? (number of staff members/departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.**

Many senior faculty members have occupied exalted positions as members of the board of studies, syllabus committee etc.

The university appoints several faculty members as members of Board of Studies/Syllabus committee/Syllabus revision committee etc periodically. The list is as follows:

Sl. No	Name of the Faculty with designation	Contributions	Period
1	Dr. A. Venkatesan, Professor, Dept of Mechanical Engg	Member of the Board of Studies, Anna University	2008-2010
2	Dr. A. Rajakumar, Professor of Chemical Engineering	Syllabus sub-committee member of Anna University	2010
3	Dr. M. Gopalakrishnan, Professor of Electrical and Electronics Engineering	Member of the Board of Studies in the erstwhile Anna University of Technology	2010
4	Mr. K. Bhaskar Assistant Professor of Automobile Engineering	Member of the Syllabus Committee in the erstwhile Anna University of Technology	2011
5	Dr. R. Parthiban, Professor of Chemical Engineering	Syllabus sub committee member of Anna University for PG programmes	2013
6	Dr. Sulochana Somasundaram, Professor of Biotechnology	Member, Board of Studies, Anna University	2013-16
7	Dr. R. Ravindran, Professor of Humanities and Sciences	Member of the Syllabus sub Committee of Anna University	2008
8	Dr. S. Sampathkrishnan, Professor of Applied Physics	Member of the Board of Studies, Anna University	2009-12
9	Prof. H. R. Premnath, Professor and Head, Marine Engineering department	Member of the syllabus sub committee of Anna University	2013-16
10	Dr.G.Devasagayam Professor & Head, Dept of Applied Chemistry	Member, Board of Studies, Anna University	2013-16

Prof E. G. Govindan, Professor of Information Technology has drafted the syllabus for the new course M.E.-Computer Science and Engineering with specialization in Networks to be introduced on approval from Anna University, Chennai.

The appointed members consult their colleagues on the expectations on the side of the students, faculty regarding desired changes and represent the same at the various meetings meetings at the appropriate time.

The class committee meetings held periodically enables the students to express their difficulties, their expectations etc., which is then conveyed to the members after due consultations with the concerned faculty.

Further the expectations of the industry are put forth to the members by the placement officer and this is also given due consideration by the members.

**1.1.7 Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating university)by it? If 'yes', give details on the process ('Needs Assessment', design, development and planning) and the courses for which the curriculum has been developed.**

No

**1.1.8 How does institution analyse/ensure that the stated objectives of curriculum are achieved in the course of implementation?**

The college conducts daily tests, model tests to gauge the understanding of the students related to the curriculum. Students who require assistance are identified and taken care of separately.

Further, student feedback is obtained orally during the class committee meetings held periodically.

The Heads of the departments periodically review the progress in the syllabus completion and also the performance of the students.

## **1.2 ACADEMIC FLEXIBILITY**

**1.2.1 Specifying the goals and objectives give details of the certificate/diploma/ skill development courses etc., offered by the institution.**

Japanese language speaking skills are imparted to the students to improve their employability. Entrepreneurship skill development programme conducted periodically to motivate students to become entrepreneur.

**1.2.2 Does the institution offer programmes that facilitate twinning /dual degree? If 'yes', give details.**

No

**1.2.3 Give details on the various institutional provisions with reference to academic flexibility and how it has been helpful to students in terms of skills development, academic mobility, progression to higher studies and improved potential for employability**

The institute provides academic flexibility to the students in terms of undertaking projects in allied departments and also in industries/ research organizations, thereby encouraging inter-disciplinary oriented work. Range of Core /Elective options offered by the University and those opted by the college

### Core Options:

The students must compulsorily register for all the core subjects prescribed. They enhance their academic and employment skills through the following:

- Additional lecture hours introduced for problem oriented and difficult subjects
- Guest lectures given by eminent persons in emerging areas from industry and also from universities in India and abroad
- Mini projects and industry based final year projects
- Seminars by students
- Industrial visits and industrial tours
- Performing more number of experiments than required and also use of demonstration experiments by faculty members.

### Elective Options

The students of UG and PG courses may choose upto a maximum of 3 - 5 electives depending on curriculum. The elective subjects offered are based on the latest technological trends and industrial needs so that at the end of the programme, the student is ready for the industry.

For example, the table below gives the range of electives available in the Anna University syllabus and those offered by the department of Chemical Engineering.

Electives offered by the University	Electives opted by the college
Food Technology Enzyme Engineering Fluidization Engineering Process Optimization Professional Ethics in Engineering Air Pollution and Control Drugs and Pharmaceutical Technology Fertilizer Technology Modern Separation Processes Waste Water Treatment Industrial Management Fermentation Engineering Petroleum Technology Pulp and Paper Technology Polymer Technology Process Modeling and Simulation Computer Applications in Chemical Engg. Fundamentals of Nano Science	Food Technology Air Pollution and Control Fertilizer Technology Modern Separation Processes Waste Water Treatment Industrial Management Petroleum Technology Polymer Technology Process Modeling and Simulation

- Choice Based Credit System and range of subject options --- Nil
- Courses offered in modular form Nil
- Credit transfer and accumulation facility – Nil
- Lateral and vertical mobility within and across programmes and courses

The students are given enormous leeway to move across various disciplines for their project work. The students may choose their project guide from any department of the college and can also use any laboratory equipment available on campus for purpose of project work/research

- **Enrichment courses**

Every department offers aptitude classes that enable the students to attend campus interviews with ease. Further the department of HSS offers guidelines on group discussions, personal interviews etc., during the communication laboratory classes. Also, the department of Humanities and Social Sciences has set up in lab in collaboration with Cognizant Technology solutions to improve the employability oriented skills of the students. The placement cell periodically hosts mock placement tests/interviews with experts from the industry and gives their feedback to the respective student departments.

For example, its mock placement activities are given below:

<b>Date</b>	<b>Name of the Programme</b>	<b>No. of Students Benefitted</b>	<b>Content</b>
7/2/2009 and 8/2/2009	MOCK Placement Workshop conducted by FORESE & Placement Cell	610	Aptitude test, Group discussion and HR Interview
13/2/2010 & 15/2/2010	MOCK Placement Workshop conducted by FORESE & Placement Cell	600	Aptitude test, Group discussion and HR Interview
26/2/2010 & 28/2/2010	MOCK Placement Workshop conducted by FORESE & Placement Cell	601	Aptitude test, Technical and HR interview
27/3/2011	MOCK Placement Workshop conducted by FORESE & Placement Cell	580	Logical, Quantitative and Technical Section Training
10/3/2012	MOCK Placement Workshop conducted by FORESE & Placement Cell	815	Online Aptitude test, Technical Interview, HR Interview
27/2/2012	MOCK Placement Workshop conducted by FORESE & Placement Cell	580	Aptitude test and Resume format, Personal Reports

10/3/2012	MOCK Placement Workshop conducted by FORESE & Placement Cell	580	Online Aptitude test, Technical Interview, HR Interview
23/2/2013 & 2/3/2013	MOCK Placement Workshop conducted by FORESE & Placement Cell	1000	Online Aptitude test, Technical and HR Interview

Following is the list of seminar on higher studies:

Date(s)	Name of the program	No of students Benefitted	CONTENT
30/7/2009	Seminar on Higher Studies Abroad- Germany	150	Quality, cost of education and Lifestyle in Germany
19/3/2010	Seminar on Higher Studies Abroad- Auckland and New Zealand	150	Presentation and Description about the college & Lifestyle in New Zealand
4/10/2010	US Universities Visit	300	Details about various universities in US and Students Interaction
21/5/2010 to 15/6/2010	IT Finishing School Program to enhance the employability among sc/st students	50	Course Content, Resource person, Financial Assistance
7/3/2011	Seminar on Higher Studies Abroad- New Zealand	112	Technical presentation on Biological nitrogen removal, and Idea about research at the university
3/8/2012	Educational Opportunities in Abroad in UK, Singapore & Australia	491	Interacted directly with the students and also assisted them with admission process
5/3/2012	Educational Opportunities in Abroad in US, Germany, France	165	Interacted directly with the students and also assisted them with admission process
29/2/2012	Educational Opportunities in Abroad Pittsburg state University	95	Interacted directly with the students and also assisted them with admission process

The following table gives the list of Training Programmes conducted by companies

Sl. No	Date(s)	Name of the program	No of student benefitted	CONTENT
1	20/9/2011	Teknothirst conducted by ISTE Student Chapter & Placement Cell	400	Paper Presentation,Poster Presentation,Project Display,Treasure Hunt
2	07/06/2011 - 27/06/2011	Project Campus - Jumpstart II with Wipro	108	A Study on Computer Organization.Operating Syatem,Computer Networks,Introduction to RDBMS
3	4/2/2012	Softskill Training Program by CTS	700	Verbal , Quantative analysis,Logical and Analytical Sessions
4	11/3/2012	CCS Exam By Cognizant Technology Solutions	233	Online Technical Assesment Test relevant to IT and Software
5	9/4/2012	Softskill Program JET SETTER by TCS	700	Verbal,Quantative,Quantative and Anlytical Sessions
6	7/6/2011 - 27/6/2011	Project Campus - Jumpstart II with Wipro	108	A Study on Computer Organization.Operating Syatem,Computer Networks,Introduction to RDBMS
7	23/3/2011	Employability and Communicatio skills development by ISTE Student Chapter	68	Communication Skill and Employebility Skills Development Sessions
8	22/2/2010	Workshop on employability Skills by ISTE Student Chapter & Placement Cell	100	Employebility Skills Development Session
9	4/2/2012	Softskill Program Conducted by HCL	120	Apptitude Skills,Communication Skills ,Leadership Skills Development Sessions
10	13/8/2011 & 14/8/2011	Softskill Program Conducted by CTS	436	Verbal,Quantative,Quantative and Anlytical Sessions
11	10/3/2010	Softskill Program Conducted by CTS for MCA Students	91	Employebility Skills Development Session

The following table gives the details of **Training Programe by Trainers & Placement Cell**

Sl. No	Date(s)	Name of the program	No of students benefitted	CONTENT
1	9/7/2011 ,10/7/2011, 16/7/2011 & 17/7/2011	Softskill Training bt SMART,TIME & FACE Training Institutions	700	Verbal, Qualitative, Quantitative and Analytical Sessions

2	29/11/2010 - 6/12/2010	Aptitude & Softskill Program by SMART Training Resources	170	Verbal, Quantitative, Qualitative and Analytical Sessions
3	28/5/2012 - 30/5/2012	Softskill Training Program Conducted by ATMAX Solutions, SKILL PRO & SMART Training Resources	910	Softskill Training Program
4	7/3/2012 - 10/3/2012	Employability Skill Program for Tamil Medium & Lateral Entry Students by SMART Training Resources	120	Communication Training, GD Session and Students Interaction
5	8/6/2012- 1/7/2012	Softskill Training Program Conducted by ATMAX Solutions, SKILL PRO & SMART Training Resources	815	Verbal, Quantitative, Qualitative and Analytical Sessions
6	9/10/2010	Workshop on INDIAN STOCK MARKET conducted by BSE(Bombay Stock Exchange)	164	Time Value of Money, Introduction of Equity Market, Benefit of long term investment & Trading Process
7	2/6/2012	NASSCOM Eligibility Test for Campus Recruitment		Placement Eligibility Test for Final Year Students

Further, the students are offered assistance and support for preparation for GATE, GRE, TOEFL, CAT and GMAT exams by the faculty members even beyond working hours to ease their passage into higher studies

Academic enrichment is obtained as in core option

**1.2.4 Does the institution offer self-financed programmes? If 'yes', list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.**

No

**1.2.5 Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If 'yes' provide details of such programme and the beneficiaries.**

As in enrichment courses.

Further, in the year 2010-2011-, the placement cell organized Japanese classes in collaboration with HCL Technologies. Around 50 students from our college participated and all of them were placed in the Japanese section of HCL Technologies.

Moreover, the three-day Entrepreneurship Awareness Camp (EAC) conducted every year creates an awareness on entrepreneurship among students and provides first- hand information on commencing new business.



### Foreign Universities visit to SVCE

Representatives from Universities of UK, US & Singapore visited college campus on 3rd August 2012 to have one-to-one interviews cum admissions.

Some of the universities represented are

- 1)Rochester Institute of Technology.
- 2)University of Denver-school of Engineering and computer science.
- 3)Southern Illinois University Carbondale

Training & Placement cell have organized a “Seminar on Educational Opportunities Abroad” on 29th Feb 2012. Dr.Lynette Olson,Provost,Pittsburg State university had visited our campus and discussed the same with the students.

Some of the Soft skills development programmes organized by the some of our departments are

Year	Department	Program conducted detail	Beneficiary	Program conducted by
2010	Information Technology	Soft skill training program	Third year students	Skill Pro Institute Smart Training
	Information Technology	MOCK Test	Third year students	CTS
	Information Technology	MOCK Placement Interview	Third year students	CTS
2011	Information Technology	Soft skill training program	Third year students	Skill Pro Institute Smart Training
	Information Technology	MOCK Test	Third year students	CTS
	Information Technology	MOCK Placement Interview	Third year students	CTS
2012	Information Technology	Soft skill training program (3 <sup>rd</sup> to 5 <sup>th</sup> Aug.2012)	Third year students	Skill Pro Institute Smart Training
	Information Technology	Soft skill training program (25 <sup>th</sup> Aug.2012)	Third year and Final year students (Lateral Entry students and Tamil Medium Students)	Skill Pro Institute Smart Training
	Information Technology	CTS Mock Placement Interview	Final Year Students	CTS
	Information Technology	MOCK Test	Third year students	FORSE

	Information Technology	MOCK Placement Interview	Third year students	Many company HR (CTS, L&T. HCL, etc.,)
	Information Technology	CTS Internship Recruitment ((17 <sup>th</sup> Mar.2013)	Third year students	CTS
2012	Computer Applications	Workshop on NS2	Students	
2013	Computer Science Engineering	Android Workshop	Students	
		Workshop on NS2	Students	
		Workshop on HTML5/CSS3	Students	

1.2.6 **Does the University provide for the flexibility of combining the conventional face-to-face and Distance Mode of Education for students to choose the courses/combination of their choice” If ‘yes’, how does the institution take advantage of such provision for the benefit of students?**

NO

### 1.3 CURRICULUM ENRICHMENT

1.3.1 **Describe the efforts made by the institution to supplement the University’s Curriculum to ensure that the academic programmes and Institution’s goals and objectives are integrated?**

The University curriculum is followed. If there are new developments and new related material is found, every effort is made to bring these to the students. The faculty members complement the university curriculum with materials that are in vogue to help students to be aware of the current day advances in the subjects.

1. Industrial visits are arranged to the students with the leading Industries, in and around Chennai, for them to understand the theory that they have studied and the actual practices in the Industries.

2. The Guest lectures are also arranged. Eminent persons from industries and reputed Institutions are called for updating the current happening to the students. This will ensure the fulfillment of our institutional academic and employability objectives.

3. *In Plant Training*- The students are encouraged to attend In-plant training during their vacation period.

4. Extra laboratory experiment apart from curriculum requirement is provided in various laboratories.

**1.3.2 What are the efforts made by the institution to modify, enrich and organize the curriculum to explicitly reflect the experiences of the students and cater to needs of the dynamic employment market?**

The curriculum itself for all branches of engineering provides a lot of scope to students, by prescribing subjects like Fundamentals of Computer Programming to help them to prepare themselves to cater to the needs of dynamic employment market namely the MultiNational Corporate Software industries.

Further, **GEMINI COMMUNICATIONS LIMITED (GCL) has signed MOU with SVCE** to enhance the Industry Institute Interaction. They delivered a series of special Lectures on “Ethical Hacking and Computer Forensics”. As part of the MOU, GCL will set up a “FORENSICS LAB” in the College and also organize suitable short term and long term courses for the young professionals in the final year so that they are ready for the Industry on graduation.

Also, students' difficulties are represented in the board of studies through expert members of the institution. The recommendations of the institute interaction cell to incorporate latest technology in the curriculum is also represented during board of studies meeting by the members.

In the case of Marine Engineering department, new modules are added to reflect the changing needs in Shipping, as and when required. This will cater to the needs of a dynamic employment market.

**1.3.3 Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?**

Climate Change, Environmental Education

The College Eco Club CARE has been involving students and faculty in a variety of activities that would have a positive impact on the environment:

a) Beach Cleaning Campaign:

The Club in association with Reclaim Our Beaches (ROB) periodically conducts Beach Cleaning Campaigns.

b) Auditing on the Garbage Collection and Disposal in the City was done in association with the Transparent Chennai.

c) Energy Auditing was done in nearby villages and schools. Awareness sessions were conducted to schools kids on energy use.

d) 150 solar lanterns were distributed.

e) Sparrow Survey was conducted in North Chennai and Artificial Nest Boxes were distributed

f) More than 2500 Tree Saplings were planted in the Campus and also in the neighboring village Santha Vellore.

Almost all branches of engineering have courses either as core subject or elective subject on the following topics of interest.

Climate change Environmental

Education- Environmental science and engineering

Gender, Human Rights- Professional Ethics in Engineering

ICT- Multimedia courses in computer science, Information technology and master of computer Application streams

#### **1.3.4 What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?**

The university itself provides the following courses to ensure the holistic development of students.

- Moral and Ethical values - Professional Ethics in Engineering  
- Professional Ethics and Human Values,  
- Participation in NCC.
- Employable and life skills - Communication Skills Lab  
-Class seminar ,Skill Development Programme
- Better career options - Freedom to choose career oriented courses in the form of Electives
- Community Orientation - Participation in NSS and other Leo, Rotract club organized programs.

Moreover, students are encouraged to take part in debates and speak on topics related to moral and ethical values in order to improve their knowledge and also facilitate free thinking and expressions. To cite a few examples:

#### **Moral and Ethical Values**

As part of Orientation Programm for the first year students, lectures and interactive session are arranged. Last year (2013) Dr S Kulandaisamy from Gandhi Peace Foundation, Chennai spoke on the Gandhian Thoughts.

Relevance of Swami Vivekananda's teaching in today's world on 10<sup>th</sup> October 2012 at function hall, SVCE, in association with Ramakrishna Mutt, Chennai

#### **Employable and life skills.**

Periodically two Training Sessions are conducted for students of all years to improve their employability and life skills.

#### **Better Career Options**

Guest lectures and Educational Fairs are arranged for learners to explore and

assess various educational and job avenues available in national and global level, as well. Additional courses are also offered. For example, the department of Electronics and Communications Engineering offers additional courses on the latest softwares pertaining to academic subjects are offered like ADS course to support RF and Microwave engineering. This is made possible through technical seminars organized through association activities in the department

### **Community Orientation**

Leo Club regularly takes students to the community to be aware of the problems faced by the cross-sections of the society. As part of this visits to Blind Schools, Orphanages, Old age homes are arranged, Students also donate materials, conduct cultural and sports programmes for the inmates

#### **1.3.5 Citing a few examples enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?**

Feedback obtained from students, alumni, industrial experts, parents of the students studying in the college are integrated and represented to the various boards of Anna University by faculty of the college. This helps in enriching the curriculum to a significant extent.

#### **1.3.6 How does the institution monitor and evaluate the quality of its enrichment programmes?**

- Through feedback
- To instill corrective action based on feedback
- Through peer review sessions

### **1.4 FEEDBACK SYSTEM**

#### **1.4.1 What are the contributions of the institution in the design and development of the curriculum prepared by the University?**

Many senior faculty members of the institution are members of the various syllabus committees as also the board of studies constituted by Anna University. Refer 1.1.6

#### **1.4.2 Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?**

The college obtains feedback from the students, alumni, parents, employers/industries and experts from academia.

#### **Students:**

The class committee meetings that are held periodically provides a platform for the students to discuss all academic issues. Any difficulties expressed by

the students are noted and the same is duly communicated to the university either through the senior faculty who are members in the various boards of studies/syllabus committees etc. or forwarded to the university when suggestions are invited during syllabus revision.

**Alumni:**

The alumni of the college who have moved on to industry or for higher studies also give a feedback on how their years in the institution have helped them perform in their places of work/study. The alumni also give constructive suggestions on helping the students achieve greater focus and improving themselves.

**Parents:**

The parents’ meet conducted by college every semester apart from other issues enables parents to give suggestions regarding the curriculum of their wards. This is duly noted by the relevant persons in the college.

**Employers/ Industries:**

Representatives of various industries give extremely useful feedback regarding the employability of the students and also their expectation from the students. Hence, any additional requirements that the industries may appreciate is provided by the college.

**Academicia:**

The college is visited by various academia in India and abroad. Their views on the curriculum is obtained and efforts are made to incorporate the same.

**1.4.3 How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/programmes?)**

The institution strongly believes in reinventing itself based on the needs of society without compromising on the basic vision and mission of the college.

In this context, the college has introduced many post-graduate courses in the past five years and also has increased the student intake in many undergraduate courses for which there is a pressing demand. The following table gives the details:

<b>Year</b>	<b>Details of courses</b>	<b>Reasons for introducing the courses</b>
2010	Two additional courses added: M.E. Computer and Communication (18) M.Tech. Biotechnology (18)	A dearth of qualified biotechnologists for pursuing research and also a demand for post graduate studies in Computer and Communication

2011	M.Tech Chemical Engineering program started (18)	Demand for post-graduates in the fields of Chemical Engineering from the Industries.
2012	Intakes of the following courses increased: B.E. Mechanical Engineering from 90 to 120. B.E. Electronics and Communication Engineering from 120 to 180. B.E. Computer Science and Engineering from 120 to 180. Two additional program added: M.E. Applied Electronics (18) M.E. Internal Combustion Engineering (18)	Demand for post-graduates in the fields of Applied Electronics and Internal Combustion Engineering. Also more number of students preferred to do their undergraduate degree in Mechanical, ECE and Computer Science streams. Hence increase in intake in the undergraduate courses.
2013	Increase of intake in B.E. Civil Engineering from 30 to 60. Two additional courses added M.Tech - Petroleum and Petrochemicals Engineering M.E. - Mechatronics	Demand for the two courses is high and an MoU is signed to utilize the expertise of LSBU

## CRITERION II : TEACHING – LEARNING AND EVALUATION

### 2.1 STUDENT ENROLMENT AND PROFILE

#### 2.1.1 How does the college ensure publicity and transparency in the admission process?

##### a. Prospectus

The prospectus gives the information on the courses available in the colleges. It also gives the various other facilities available in the College and about the extracurricular activities.

##### b. Institutional Website

The details provided in the prospectus and admission details are also given on the Website <http://www.svce.ac.in>. The website is updated on a daily basis.

##### c. Advertisement in Regional/ National Newspapers

As the college is a most well known advertisements for admission of students are not given in the news papers. However parents, students and the general public come to know of the important celebrations, such as College Day, Graduation Day, National and International conferences through announcements and news papers.

**d. Any other (specify)**

As the college is existence for the past 27 years and being the most reputed one has earned a name for itself among the students and the parents. During the admission time, being one of the most sought after college in the region, interaction among the stake holders gives enough publicity.

**2.1.2 Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any other) to various programmes of the Institution.**

The College has UG and PG degree courses in Engineering and Technology and an MCA programme. The minimum qualifications prescribed are:

**Eligibility for Telugu Linguistic Minority, Others with Tamilnadu Nativity and Other States in India**

**Qualification**

- a. A Pass in XII Standard of Tamil Nadu HSC (Academic) with Mathematics Physics and Chemistry  
(or)
- b. A Pass in XII Standard of Tamil Nadu HSC (Vocational)  
(or)
- c. A Pass in Diploma Examination(for lateral entry student) in Engineering / Technology of the State Board of Technical Education and Training, Tamil Nadu  
(or)
- d. A Pass in equivalent examination accepted by Anna University for Admission to B.E./ B.Tech. degree courses

**Minimum Marks**

**Tamil Nadu students (Telugu Linguistic Minority and others with Tamilnadu Nativity**

**For SC/ST candidates**, a mere pass in the qualifying examination will suffice and the minimum marks are the same as the passing minimum for HSC/Diploma of the state of Tamil Nadu. Candidates belonging to communities other than SC/ST should have obtained the following minimum marks.

**A. CANDIDATES OF HSC (Academic) AND OTHER EQUIVALENT EXAMINATIONS**

**(i) For Communities Other than BC/MBC & DNC/SC/ST - Other Communities**

A minimum average of 60% in Mathematics, Physics and Chemistry



**(ii) For BC Communities**

A minimum average of 55% in Mathematics, Physics and Chemistry

**(iii) For MBC & DNC Communities**

A minimum average of 50% in Mathematics, Physics and Chemistry

**B. CANDIDATES OF HSC (Vocational)**

**(i) For Communities Other than BC/MBC&DNC/SC/ST - Other Communities**

A minimum average of 60% in the related subjects and Vocational Subject theory and Practical

**(ii) For BC Communities**

A minimum average of 55% in the related subjects and Vocational Subject theory and Practical

**(iii) For MBC & DNC Communities**

A minimum average of 50% in the related subjects and Vocational Subject theory and Practical

**C. DIPLOMA CANDIDATES**

**(i) For Communities Other than BC/MBC&DNC/SC/ST - Other Communities**

A minimum average of 60% in the pre final semester and final semester

**(ii) For BC Communities**

A minimum average of 55% in the pre final semester and final semester

**(iii) For MBC & DNC Communities**

A minimum average of 50% in the pre final semester and final semester

**Special Eligibility criteria for B.E. Marine Engineering:**

**Admission for Unmarried Indian Citizens only.**

**Candidates who have studied in Science Stream (English, Maths, Physics, Chemistry) at 10+2 level are only eligible for admission.**

**A minimum of 60% marks in Mathematics, Physics and Chemistry for all categories i.e., OC/BC/MBC/SC/ST.**

Diploma holders in the following stream of study i.e Marine, Mechanical, Electrical or Electrical and Electronics Engineering are eligible to join as lateral entry candidates in the second year of the B.E. Marine degree programme.

Age not less than 17 years and maximum age is 20 years.

Candidates should have obtained 50% marks in **English** at 10<sup>th</sup> or 12<sup>th</sup> standard Examination.

**Candidates will be admitted to the course only after obtaining Physical Fitness Certificate signed by a Medical Officer approved by the Director General of Shipping, Government of India.**

**MCA degree**

**Eligibility:** Any Degree with Mathematics/Statistics/ Computer Oriented subjects in degree level or Any Degree with Mathematics at Plus two level or equivalent and should have passed in the Tamil Nadu Common Entrance Test (TANCET) conducted by Anna University as per the guidelines of Tamilnadu

Government in the case of Government quota and for the management quota the candidate should have cleared the entrance examination conducted by the Consortium of self- financing professional, arts and science colleges in Tamilnadu.

**P.G.Programmes (M.E.)**

**Eligibility:** For the Masters Programme, under Government quota in Engineering and Technology, Bachelors degree at the appropriate branch of study and should have passed in Tamil Nadu Common Entrance Test (TANCET) conducted by Anna University as per the guidelines of Tamilnadu Government and for the management quota the candidate should have cleared the entrance examination conducted by the Consortium of self- financing professional, arts and science colleges in Tamilnadu.

**Cut off percentage for admission:**

For admission to the UG and PG programmes, the cut off percentage of marks at the 10+2 level/ degree level for 2012-13 admissions are as follows. These include Anna University Single window admission and quota for minority, management, NRI, Foreign nationals, differently-abled and sports wherever applicable. (Under each category there are special quota for SC, ST, BC and MBC wherever applicable).

**2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the programmes offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.**

Our College(SVCE) U.G Programme cut off marks for Dote and Management given below

Sl. No	Programme	Highest cut off percentage Dote/ Mgmt	Lowest cut off percentage Dote/ Mgmt
<b>U.G.Programme</b>			
1.	Automobile Engineering	196.5/182.75	121.25/93.75
2.	Biotechnology	197.5/181.5	138/88
3.	Chemical Engineering	195.75/190.75	144.5/101.25
4.	Civil Engineering	197/186.75	180.25/130.25
5.	Computer Science and Engineering	197.25/192	125.75/103.25
6.	Electrical and Electronics Engineering	197.25/193.75	134.25/86.75
7.	Electronics and Communication Engineering	197.75/192.25	159.75/99.25
8.	Information Technology	195.5/188.75	118.25/95.75
9.	Marine Engineering	197/190	175.75/130.5
10.	Mechanical Engineering	198.5/195.5	117.5/102

Colleges for comparison for U.G level

The following table and bar chart shows the comparison with other colleges to the various branches that are offered by them. The table clearly indicates that our college (SVCE) is sought after by the students of any community.

- SVCE** - Sri Venkateswara College of Engg,
- REC** - Rajalakshmi College of Engg,
- SMEC** - Sakthi Mariamman Engineering College,
- RGCE** - Rajivgandhi College of Engg,
- SSN** - Sri Sivasubramaniya Nadar College of Engg,
- KEC** - Kings Engineering College,
- DMI** - DMI College of Engg.

**Comparison with other colleges of the affiliating university within the city/district. (College Level)**

College	Cut off for branch of Automobile Engg				
	OC	BC	MBC	SC	ST
SVCE	194.75	192.8	189.5	170.3	-
REC	188.5	184.3	179.3	147	-
SMEC	83.75	-	-	-	-
RGEC	88.5	-	-	-	-

College	Cut off for branch of Biotechnology				
	OC	BC	MBC	SC	ST
SVCE	192.25	188.3	182.8	155	-
REC	183.75	180.8	171.5	143	-

College	Cut off for branch of Civil Engineering				
	OC	BC	MBC	SC	ST
SVCE	195.75	195.3	192.8	180.3	-
REC	188	186.8	180.8	158.5	-
SMEC	131	118	119.8	102.8	-
DMI	161.75	155.8	150.3	123.3	-
SSN	196.5	195.8	193	183.3	-

College	Cut off for branch of Chemical Engg				
	OC	BC	MBC	SC	ST
SVCE	191.75	190.5	181.3	145.8	-
SSN	196	194.5	189.3	173.5	155.5

College	Cut off for branch of CSE				
	OC	BC	MBC	SC	ST
SVCE	195.75	195	191	172.5	136.5
REC	189.5	187.8	180.5	152	89.5
SMEC	127	95.25	91	81	-
RGEC	134.25	118	84.5	81.5	-
KEC	147.75	135.3	102.8	85.75	-
DMI	154	149.8	142	111.3	-
SSN	197.25	196.8	194	183.5	155

College	Cut off for branch of ECE				
	OC	BC	MBC	SC	ST
SVCE	196.5	196	193.8	183	159.75
REC	192	190.3	186.5	168	112.5
SMEC	139.5	121.5	99.5	81.75	-
RGEC	144	132	114.8	80.25	-
KEC	171	157.3	124.8	111.5	-
DMI	164.75	158	149.5	129.8	-
SSN	198	197.5	195.8	188.8	-

College	Cut off for branch of EEE				
	OC	BC	MBC	SC	ST
SVCE	196	195.3	192.3	179.5	145.75
REC	189	187.3	182.8	155	-
SMEC	114	88.25	90.25	86.5	-
RGEC	87.25	-	-	-	-
DMI	146	133	112.8	95.5	-
SSN	197	196.8	194.3	185	-

College	Cut off for branch of IT				
	OC	BC	MBC	SC	ST
SVCE	194.75	193.5	189	163.5	118.25
REC	185.75	184.3	176.5	144.5	110.25
SMEC	89.25	-	-	-	-
RGEC	106.5	-	-	-	-
KEC	115.25	86.25	87.25	92.75	-
DMI	136	123.8	105.3	94	-
SSN	196.25	195.8	192.8	177.8	-

College	Cut off for branch of Mechanical Engg				
	OC	BC	MBC	SC	ST
SVCE	196.75	196.3	194	183	171.25
REC	191.5	190.3	186.3	164.5	125.5
SMEC	156.75	145.3	152.3	122.3	-
RGEC	141.25	135	131.8	108.8	-
KEC	169.25	165.5	160.5	144.8	-
DMI	165.25	161.5	158	131.3	-
SSN	197.5	197.3	195.5	187.3	186

Our College(SVCE) P.G Programme cut off marks for TANCET and Consortium(Management) given below.

Sl. No	Programme	TANCET Marks Out of 50		Consortium Mark Out of 50	
		High	Low	High	Low
<b>P.G.Programme</b>					
1.	Communication engineering.	42.63	37.51	34.78	14.78
2.	Applied electronics	40.01	28.68	24.35	20
3.	Computer & communication	40.83	35.55	32.17	17.39
4.	Computer Science and Engineering	43.77	35.47	39.13	16.52
5.	Power Electronics and Drives	39.43	36.21	34.17	15
6.	M.Tech Bio Technology	33.95	18.04	36.67	16.67
7.	M.Tech Chemical Engineering	32.7	20.67	40.83	-
8.	M.E Computer Aided design	32.77	26	33.04	13.33
9.	M.E Internal Combustion Engineering	31.36	16.54	33.33	21.67
10	MCA (Masters of Computer Application)	37.25	17.25	54	26

**2.1.4 Is there a mechanism in the institution to review the admission process and student profiles annually? If 'yes' what is the outcome of such an effort and how has it contributed to the improvement of the process?**

With respect to admission process for the government quota seats, the Tamilnadu Government norms (single window system- admission by affiliating university) ought to be followed. Hence the institution doesn't have

a role in the admission process. For the management students, the Consortium of self-financing professional, arts and science colleges in Tamilnadu norms are followed. It is pertinent to mention that the college being reputed and sought after institution only students having high percentage of marks are able to secure an admission.

**2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion**

**\* SC/ST / OBC**

During the single window system, as per Government norms, certain percentage of seats is reserved for students from the disadvantaged community and OBC etc. The Tamilnadu Government follows 69% of reservation in all educational institutions. As per the Supreme Courts directive every year the state Government provides extra seats so that the other communities are not affected by this special extra reservation policy. This is in addition to the eligibility under the general category of seats by virtue of the marks obtained by the disadvantage community students. This policy ensures dual advantage to the weaker sections of the society.

**\* Women**

The College does not discriminate on the basis of gender. For example, in the current academic year 2012 -13, out of a total strength of 4211 students 29.40% (1238 nos) are girl students.

**\* Differently abled**

We have instances of differently-abled students having successfully completed the course in our College. At the moment there are nine such students studying in the College.

**\* Economically weaker sections**

For economically weaker sections we provide scholarships based on economic means and merit-cum-means.

**\* Fees Waiver Scheme**

5% of students are admitted through fees waiver scheme.

**\* Minority community**

During the single window system, as per Government norms, certain percentage of seats is reserved for students from the minority community.

**\* Any other (First generation graduates/Rural students)**

Our state, Tamilnadu bears Rs.20000/- of the total tuition fee payable every year by the student. The money is disbursed around the end of every calendar year. To give a fair chance to the students from rural areas, Tamilnadu Government has based the admission only on the marks scored in the qualifying examination.

**2.1.6 Provide the following details for various programmes offered by the institution during the last four years and comment on the trends. i.e. reasons for increase / decrease and actions initiated for improvement**

**APPLICATION RECEIVED:** It may be noted that 50% of seats filled through counselling conducted by Tamil Nadu Engineering Admission based on cut off marks & 50% of seats filled through common admission conducted by Consortium of Professional Arts & Science Colleges in Tamil Nadu based on cut off mark marks.

YEAR	DEPT	NUMBER OF STUDENTS ADMITTED FIRST YEAR			NUMBER OF STUDENTS ADMITTED LATERAL ENTRY		
		DOTE	MGT	TOTAL	DOTE	MGT	TOTAL
2009-UG	AE	26	15	41	19	2	21
	BT	24	29	53	3	0	3
	CS	52	60	112	8	1	9
	CE	14	16	30	2	1	3
	CH	37	24	61	29	0	29
	EE	50	61	111	11	2	13
	EC	55	65	120	6	2	8
	MR	12	15	27	0	3	3
	ME	42	48	90	4	2	6
	IT	54	54	108	16	3	19
	<b>TOTAL</b>	<b>366</b>	<b>387</b>	<b>753</b>	<b>98</b>	<b>16</b>	<b>114</b>
2009-PG	CA	15	23	38	--	--	--
	COM.SYSTEM	18	6	24	--	--	--
	CAD	12	1	13	--	--	--
	CSE	14	10	24	--	--	--
	PED	17	7	24	--	--	--
	<b>TOTAL</b>	<b>76</b>	<b>47</b>	<b>123</b>	--	--	--
2010-UG	AE	26	37	63	6	5	11
	BT	17	29	46	0	0	0
	CS	56	73	129	14	6	20
	CE	12	19	31	3	2	5
	CH	43	31	74	28	0	28
	EE	50	70	120	15	6	21
	EC	50	74	124	14	9	23
	MR	13	15	28	0	2	2
	ME	41	58	99	9	7	16
	IT	49	71	120	17	4	21
	<b>TOTAL</b>	<b>357</b>	<b>477</b>	<b>834</b>	<b>106</b>	<b>41</b>	<b>147</b>
2010-PG	MCA	17	32	49	--	--	--
	COM.SYSTEM	18	6	24	--	--	--
	CAD	10	2	12	--	--	--
	CSE	14	10	24	--	--	--
	PED	16	8	24	--	--	--
	CC	0	15	15	--	--	--
	BIO	0	10	10	--	--	--
	<b>TOTAL</b>	<b>75</b>	<b>83</b>	<b>158</b>	--	--	--

2011-UG	AE	27	35	62	5	6	11
	BT	20	33	53	0	0	0
	CS	58	67	125	20	3	23
	CE	13	17	30	3	3	6
	CE	36	44	80	20	7	27
	EE	51	67	118	19	6	25
	EC	52	67	119	14	9	23
	MR	9	15	24	0	6	6
	ME	42	52	94	9	10	19
	IT	54	71	125	16	2	18
	<b>TOTAL</b>	<b>362</b>	<b>468</b>	<b>830</b>	<b>106</b>	<b>52</b>	<b>158</b>
2011-PG	MCA	28	32	60	--	--	--
	COM.SYSTEM	19	6	25	--	--	--
	CAD	13	4	17	--	--	--
	CSE	17	8	25	--	--	--
	PED	18	6	24	--	--	--
	CC	13	4	17	--	--	--
	BIO	14	4	18	--	--	--
	CHE	2	1	3	--	--	--
	<b>TOTAL</b>	<b>124</b>	<b>65</b>	<b>189</b>	--	--	--
2012-UG	AE	29	34	63	--	--	--
	BT	24	27	51	--	--	--
	CS	84	104	188	--	--	--
	CE	12	18	30	--	--	--
	CH	42	46	88	--	--	--
	EE	57	64	121	--	--	--
	EC	83	100	183	--	--	--
	MR	14	13	27	--	--	--
	ME	59	67	126	--	--	--
	IT	55	63	118	--	--	--
	<b>TOTAL</b>	<b>459</b>	<b>536</b>	<b>995</b>	--	--	--
2012-PG	MCA	34	20	54	--	--	--
	COM.SYSTEM	10	15	25	--	--	--
	CAD	11	3	14	--	--	--
	CSE	10	13	23	--	--	--
	PED	12	9	21	--	--	--
	CC	9	7	16	--	--	--
	BIO	11	6	17	--	--	--
	CHE	7	1	8	--	--	--
	ICE	13	3	16	--	--	--
	APPL.ELEC	15	3	18	--	--	--
	<b>TOTAL</b>	<b>132</b>	<b>80</b>	<b>212</b>	--	--	--

<b>2012 Ph.D</b>	Dept. of ME	3
	Dept. of EE	1
	Dept. of IT	2
	Dept. of BT	4
	Dept. of AM	2
	Dept. of AC	5



M.Phil., Integrated PG / Ph.D., Value added Certificate, Diploma, PG Diploma	Not Applicable
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The college constantly reviews the situation with regard to employability and the demand from the public as well as the industry for certain courses. In order to fulfill the need / aspirations of the industry and the general public increases the number of seats in certain courses as well as start fresh UG and PG courses. It is relevant to state that the college has not reduced the number of seats in any of its programme nor closed down any course. It is evident from the fact that all the seats are grabbed within the first 3 days of counseling through single window system which goes on for about 1 ½ months.

## **2.2 CATERING TO STUDENT DIVERSITY**

### **2.2.1 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?**

The Government policy for the differently-abled students are strictly complied with during the admission. (Single window admission system conducted by the affiliating University. In the college special attention is given their needs are taken care during the course of study.

For the differently-abled students (physical disability), the classroom is allotted on the ground floor. Ramps and separate sanitary facilities are being provided. In some instances, the faculty gave extra coaching for a speech and hearing impaired student at their residence.

We have instances of differently-abled students having successfully completed the course in our College. At the moment there are nine such students studying in the College.

### **2.2.2 Does the institution assess the students' needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.**

Students enter engineering colleges from three different school streams viz., State board (vernacular and English medium), CBSE and ICSE. Their level of knowledge in key subjects and their assessment in school also varies widely. So the gaps in the entry level due to the above are bridged before the commencement of the first year classes by conducting an orientation programme in the key subjects. In addition during the academic programme students requiring special attention in specific subjects are identified and extra coaching classes are conducted after the college working hours to improve their performance and confidence level.

### **2.2.3 What are the strategies drawn and deployed by the institution to bridge the knowledge gap of the enrolled students to enable them to cope with the programme of their choice? (Bridge/Remedial/Add-on/Enrichment Courses, etc.**

The students are allowed to choose electives out of 5 to 6 options offered by the university. In this regard, Chemical engineering offers electives in core as well as interdisciplinary papers which helps students to widen their employment opportunities. Further, key courses like Process Modeling and Simulation, Modern Separation Process, etc. are offered to the students to enrich their mathematical and computational aspects in the field of chemical engineering. These are preferred by the industries and research bodies and hence increase the employability potential/higher studies progression of students. Also remedial classes are conducted after college hours. In the case of Marine Engineering extra training/classes (modular courses) to meet the demands of the career at sea are conducted.

#### **2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?**

The college does not discriminate the students and its staff on the basis of their gender. Equal opportunities are given to both the genders. During the Orientation Programme for the fresh intake of students and during faculty induction programme for its new staff it is clearly informed to all of them. It can be seen nearly 50% of the faculty and 30% of the students strength are females. All the necessary requirements for the females both in the college and the hostel have been adequately taken care of the class room also there is no gender bias. There are mechanisms available to them to address any of their grievances.

Environmental science and protection is an integral part of the academic programme. The need for conservation of energy, water, etc. is reiterated during counseling time, conducted every second Tuesday for the students. Students and staff are active members of the LEO, ROTARACT and ECO clubs and take part in many voluntary activities, both in the college campus and in nearby villages, to promote the protection of environment, highlight sustainable development, propagate use of alternate source of energy (solar energy), etc. They take part in various conservation activities like the sparrow survey, turtle walks, deer census, etc., apart from participating/winning in ecological/environmental competitions.

#### **2.2.5 How does the institution identify and respond to special educational/learning needs of advanced learners?**

The college recognizes and promotes the skills and knowledge of the advanced learners by allowing them to do research projects, more training, awards and sponsors their travel both domestic and abroad. All the departments have listed their achievements in this regard separately. We encourage the advanced learners to do research under the guidance of faculty. For instance the department of Chemical Engineering offers special electives like Process Modeling and Simulation, Modern separation process etc., to the

advanced learners who wish to do their higher studies in abroad. Many of our students are doing post graduation in USA benefitted by these courses. The central library has a collection of over 1000 books for preparing for competitive examination viz GATE, CAT, GRE, TOEFL, etc.

**2.2.6 How does the institute collect, analyze and use the data and information on the academic performance (through the programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc.)?**

The institute has a centralized student's data system regarding the academic related activities like assessment test, university exams, internal exams etc. The personal data will be maintained by the individual faculty advisors. Each faculty advisor is put in charge of 20 students to monitor, shape and advice them to ensure their overall comprehensive growth and achievements. The slow learners and students from disadvantaged communities and students with low marks are given extra coaching after the normal working hours of the college. In addition slow learners and student with low marks are identified during the second year and they are put in one class so that they are given more intensive coaching. The College has the least number of students who are at risk of failures and dropouts in its history. It is usually be rectified with the following measures

- 1 Student counseling by faculty advisor
- 2 Motivation Lectures
- 3 Provision of scholarship (by the college) for economically backward students.
- 4 Special classes and tests for the needy students.
- 5 Discussing the student progress with their parents in regular intervals.
- 6 Psychological counseling done every year for depressed students by special counsellor.

**2.3 TEACHING-LEARNING PROCESS**

**2.3.1 How does the college plan and organise the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)**

The academic calendar is planned well in advance and communicated to the students. The lesson plan, indicating the topics covered lecture wise, for each and every subject is prepared by the faculty before the commencement of the semester and it is duly approved after careful examination by the Head of the Department and made available to the students. Lesson plan are also displayed in the college website The students are assessed on a continuous basis by conducting three tests per semester (CAT) and evaluated within 2 -3 days after the exams. Daily test are also conducted and it is part of the evaluation system. Question banks are provided. The marked answer papers are returned to the students and an opportunity is given to the students to

discuss the evaluation with the teacher. Any error is rectified on the spot by the teacher. These tests carry 15 marks towards internal assessments. The attendance carries 5 marks. (The marks for attendance: 76 – 80% attendance – 1 mark; 81 – 85% attendance - 2 marks; 86 – 90% attendance – 3 marks; 91 – 95% attendance – 4 marks; 96% and above – 5 marks.) The attendance at the end of every month is communicated to the students. Regular assignments are given during the academic year and they are evaluated. An end semester model question paper is provided.

### **2.3.2. How does IQAC contribute to improve the teaching –learning process?**

- The college has got the following objectives in order to improve the student outcomes for planning and overcoming the barriers.
  - ✓ Academic objective
  - ✓ Employment objective
  - ✓ Industry Objective
  - ✓ Professional objective
  - ✓ Research Objective
- The above objectives has a program leader in the rank of senior professor. The outcome of the data from every department and its impact on the above objectives are discussed in the Management Review Meeting conducted twice in a year and also in the staff council meeting conducted fortnightly. Appropriate decisions are implemented.

### **2.3.3 How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?**

#### **Lecture method and Interactive learning:**

The faculty use chalk and board and audio visual aids in teaching. Students are also encouraged to actually interact during the lecture hour by getting the doubts clarified on the spot.

#### **Project-based learning:**

During the period of study in the 6<sup>th</sup> to 8<sup>th</sup> semester, many real time projects are given to the students and they are guided by both faculty and Industry/Research personnel. Over 50% of the final year UG and PG projects are Industry based real time projects.

#### **Computer-assisted learning:**

The College has over 1250 computers, 78 printers 180 application softwares and 27 system software/languages costing about Rs.70 lakhs. These are effectively used for teaching. About 113 courses are ICT enabled. The students are also encouraged to develop softwares for the solution of the assignments and tutorials. Many final year projects are completed through the use of software.

**SMART classes:**

All the departments of the college have each two number of SMART class room. These are in addition to the LCD projectors and pull down screen. The college as a policy has planned to convert all its class rooms into SMART class in a phased manner. In the academic year 2013-2014 another 15 to 20 wireless interactive boards will be added.

**Experimental learning:**

Students do 2 to 4 laboratory courses per semester from 1<sup>st</sup> to 7<sup>th</sup> semesters. More than the required number of experiments, beyond the minimum specified by the university is performed. All the laboratory have excellent facilities, both hardware and software based. For the experiments detailed instruction manuals are provided. The observations are checked and verified by faculty and record books are maintained systematically. Two faculty members and one instructor are assigned for each practical class. Video cassettes for specialized topics are available in the departments as well as in the library. Laboratory classes are software or modern hardware based.

**Seminars:**

3 – 8 guest lectures in a year by eminent people from Industry, Academic and Research Institutions are arranged by each Department. One or two day workshops and seminars are also arranged frequently by each Department. One student Symposium is organized by each Department every year. One of the student chapters (Indian Institute of Chemical Engineers – SVCE Student Chapter) has achieved the distinction of being awarded the **Best Student Chapter prize for seven consecutive years** on an All India basis. One Seminar period is conducted every week from 3<sup>rd</sup> semester onwards. During this period students give seminars on technical topics.

**Others:**

Technical Societies and Student chapters of National/International Associations are active and students are encouraged to present technical papers at National/ International Conferences. Peer interaction is done through inter collegiate student technical symposia which are arranged and conducted by students and funded by the College.

During the period of stay, many Industrial visits are arranged to the nearby industries and also an Industrial Tour is arranged in the 6<sup>th</sup> semester by every Department. Through these the students visit many industries across the country.

The student attendance in the classes is entered into a centralized computer system which generates the attendance report every month. This is communicated to the students. The Internal Marks system mandated by the University is based on the marks obtained by the student in the three continuous assessment tests and attendance. These are computerized. There is complete transparency in the internal evaluation of the students. Progress (marks and attendance) is conveyed to the students regularly and also to the parents periodically.

#### **2.3.4 How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?**

Along with the course the current problem associated with that particular topic of study will be normally explained to the students to make them to think towards the solution for that particular problem (if they are interested). Once the student is willing to take up that scientific issue then brain storming discussion with the faculty member of that area will be encouraged. This makes the student to think, apply his creativity and scientific temper towards particular scientific problem which transforms the student into life-long learners and innovators. Programmes from EDUSAT and EKLAVYA and specialized lecture given by IIT faculty and experts from the industry expose the students the current developments and areas of research which kindles their creative abilities. This has led our students to innovative projects and achievements.

Alumni meetings are arranged twice in a year. The meeting provides the students to interact and learn from the successful industrialist and entrepreneurs. They also motivate the students to excel in their future endeavour.

#### **2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? Eg: Virtual laboratories, e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.**

Faculty members use e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL), working models, open course ware from national and international universities like IIT, MIT (USA) etc., animation videos which explains the process etc for effective teaching. Also use of EDUSAT and EKLAVYA programmes, Multimedia for various skills development. ICT usage such as SMART board with data storage facility, remote pointer etc. OHP, guidance to students to access NPTEL for learning material, are incorporated too.

#### **2.3.6 How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?**

The college sponsors and arranges FDP/ workshop for faculty member. Guest lectures by eminent people from industries/other academic institutions are arranged at regular intervals. The College sponsors and encourages the students and the faculty to present the papers. The encouragement to the faculty is given to publish paper in the refereed journals. In the intranet IEEE journals are available online. There are good collections of recently published books in main/department libraries.

**2.3.7 Detail (process and the number of students \benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling/mentoring/academic advise) provided to students?**

Every 20 students put under charge of a faculty advisor. This is done during the first year and the faculty advisor will continue to monitor the growth of the students and its academic needs, general counseling till the time the student pass out from the college. Some needy students are given intensive counseling by the faculty of the department and from external experts. The faculty advisor is constantly in touch with the parent/guardian. Professional counseling is given by the college placement officer on a regular basis and experts from the industry are invited now and then to brief and guide the students. On an average 600 to 700 students from the third year are counseled professionally every year. From the academic year 2011-2012 second year students are also receive professional counseling.

**2.3.8 Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faulty to adopt new and innovative approaches and the impact of such innovative practices on student learning?**

The following innovative teaching methods are adopted by the faculty.

- Computers are used for teaching purposes and internet facility is available to students and faculty.
- SMART class rooms, OHPs, LCDs, videos etc. are used for teaching purposes.
- Online availability of IEEE journals in the intranet.
- Good collections of recently published books in library
- Well structured lesson plans are prepared/revised for all theory and practical courses on a period to period basis, scrutinized by HODs and made available in the website for students access.
- Teachers are encouraged to publish in Journals and present papers in Seminars and Conferences.
- Teachers are sponsored for doing Masters/ Ph.D. degree with leave and full salary for one year.
- Teachers are deputed with full financial support for attending Workshops/ Conferences/ FDPs.
- Research and R & D are promoted and encouraged and efforts are made to obtain sponsored R & D and consultancy projects.

The impact of such innovative practices is that the students are exposed to new modern methods of teaching and more and better understanding of the knowledge transferred to them within the allotted time. It helps to assess and improve the teaching-learning process that happens from the formative to summative period.

### 2.3.9 How are library resources used to augment the teaching-learning process?

Separate Library website is available. The website name is <http://www.DLIB> this facility is available only for intranet services. The benefits can be availed by the faculty and student are as follows:

1.	Online Public Access Catalogue (OPAC)
2.	Reprographic Service
3.	Book Reservation
4.	Internet Access
5.	Reference Service
6.	Conference Alert Service (Staff, Student)
7.	Competitive Examination Books
8.	Multimedia Service
9.	Old(Previous years) Question Paper from University
10.	Online Book Renewal
11.	Digital Library- E-Books, E-Journals & E-Lectures

The library is fully computerized using AutoLib Software and covering almost all the functions of library. All the books are bar-coded in the library & barcode laser scanners are used in the circulation counter for book transaction. More than 1000 Periodical Journals in Print/online available like IEEE, Science Direct (Engineering ,Chemical, Biotechnology Pakage) Springer(Engineering and Mechanical), ASCE, IET, NISCAIR, ACM, IAS, ASTM Digital Library, J-Gate, Nature, Scientific American. Etc., More than 360 e-books are available in the Library. Expansive Built-up area of 1338 SQ.Mts for Ground, first & Second floor. Centralized air Conditioned in Ground Floor.

The central library has more than 77000 volumes of books and 800 journals (including online journals). It caters to the needs of all courses with open access to the students. The library is open on all working days (except Government holidays) from 8.00am to 8.00pm and on Sundays from 10.00am to 4.00pm. Students can access e-journals during the library hours and after college hours. Also all the departments have their departmental library and have a total collection of 7000 titles and 10000 volumes of books. The students are also allowed to use the departmental library. Teachers and students effectively use the library to enrich their knowledge.

### 2.3.10 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

No. The institution has not faced any challenge in completing the curriculum within the planned time frame.. Affiliating university has prescribed a minimum of 450 periods per semester. The planned time frame and the



academic calendar for each semester gives scope for extra hours and that is fully exploited by the institution.

### 2.3.11 How does the institute monitor and evaluate the quality of teaching learning?

In every semester the institute conducts three continuous assessment test (CAT).

The CAT 1 is conducted as a three hour test on the lines of university examination pattern covering the first four units. The CAT 1 covers major portion of the syllabus. CAT 2 is conducted at the end of the semester covering the remaining units of the syllabus. CAT 3 is conducted as periodical tests throughout the semester. The CAT is given a weightage of 40%, 10% and 50% respectively for internal assessment marks. In addition to the above assignments, repeat test for the failed students and extra coaching classes are also conducted. The performance of the students in each subject and the ability of the teacher concerned in producing better results are evaluated.

## 2.4 TEACHER QUALITY

### 2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	-	-	-	-	-	-	-
Ph.D.	27	6	9	2	21	5	70
M.Phil./B.E/B.Tech	3	0	0	0	5/1	12/5	17/9
M.E/M.Tech/MS	2	0	17	8	88	102	217
Temporary teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-
Part-time teachers							
Ph.D.	1	-	-	-	-	-	1
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-

Faculty selection is done by the interview selection committee consists of HOD, Principal and an expert from other Institutions (viz., IIT/ Anna University and R & D Institutions) and the Secretary of our institution is a seasoned academician and also a former Professor of Anna University. The process of selection consists of a brief lecture by the applicant followed by a technical interview. The AICTE/ Affiliating university norms for the

qualification and experience are strictly followed. The effective mechanism in recruiting qualified faculty is thus achieved. This is periodically done based on requirement as per the student staff ratio and to meet the changes in the university curriculum.

**2.4.2 How does the institution cope with the growing demand/ scarcity of qualified senior faculty to teach new programmes/ modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bioinformatics etc.)? Provide details on the efforts made by the institution in this direction and the outcome during the last three years.**

In all the new courses added and to teach subjects of emerging areas, the college has always strived to employ persons of repute with domain expertise. For eg. in Marine Engineering, people who have sailed as Chief Engineers on variety of ships and with more than 25 years of experience have been employed as faculty. Similarly, for the subject of Process Modelling and Simulation in B.Tech Chemical Engineering and for M.Tech. Petroleum Engineering and Petrochemicals Engineering, well qualified faculty with doctoral qualification have been employed. The same trend has been followed for all the new additional courses and in the emerging areas. Visiting faculties are appointed based on the field of specialized requirement for a short period. Also the institution encourages young faculty members to pursue research through QIP and/or Part time external registration for Phd and offers incentive for Phd holders to retain them in the institution. Encouragement is also given for continuing research by way of applying for funded projects and getting the grants from various research agencies. Faculty exchange Programme by collaborating with Institutes of repute like London South Bank University also helps in establishing knowledge partnerships.

Further faculty have been sponsored to attend FDP/ STTP / Workshops regularly to enhance the knowledge and skills in the emerging areas which is evident from the table provided in Sl. No 2.4.3

**2.4.3 Providing details on staff development programmes during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.**

**a) Nomination to staff development programmes**

<b>Academic Staff Development Programmes</b>	<b>Number of faculty attended</b>
Refresher courses	28
HRD programmes (Faculty development program)	62
Orientation programmes	110
Staff training conducted by the university	51
Staff training conducted by other institutions	61
Summer / winter schools, workshops, etc.	362

**b) Faculty Training programmes organized by the institution to empower and enable the use of various tools and technology for improved teaching-learning**

- ❖ *Teaching learning Methods/approaches*
  - Orientation Programme at the onset of academic year
  - Pedagogical techniques for new faculty by experienced Professors.
  - Training in the use of modern teaching aids like LCD Projectors, smart class room devices etc.,
  - 2 nos of FDP / Seminar have been funded by AICTE during March 2013 amounting to Rs. 2.25 lakhs for department of Chemical Engg and Information Technology
- ❖ *Handling New Curriculum*
  - Deputing Faculty members to FDP Programmes conducted by Anna University and it's affiliated Colleges
  - Through brainstorming sessions so free exchange of ideas are possible which include both experience faculty members and novices.
- ❖ *Content/ Knowledge Management*
  - Use of multimedia Contents
  - Employment of modern Pedagogical aids such as Power Points, educom, smart boards, three dimensional screen, LCD projectors, Laptop and OHP's.
  - Learning through demonstration and experimentation.
- ❖ *Selection ,development and use of enrichment materials*
  - Access to top class learning materials developed by institutions of higher learning such as MIT.
  - User friendly notes by other learning centres and own notes to enrich the learning process by the students.
  - Employment of animation tools to ingrain the concepts into students for effective learning.
- ❖ *Assessment*
  - Delivery of pep talk lecture that will be assessed by colleagues.
  - Feedback through test at the end of the training session.
- ❖ *Cross cutting issues*
  - Motivation and arousing curiosity are given predominance
  - Enhancing of retention rate through periodic review process
  - Immediate application of concepts learned to the classroom environment
- ❖ *Audio visual aids/multimedia*
  - Training imparted in the use of audio visual aids/ multimedia devices
  - Encouragement of the constant use of audio visual aids/multimedia in the delivery of class lectures
- ❖ *OER's*
  - The other Educational resources like web based learning handbooks, simulation/ physical models are also encouraged to be utilized for lecture delivery.

- ❖ *Teaching learning material development selection and use*
  - Preparation of laboratory manuals as per ISO standards
  - Step by step instruction to make use of application software
  - Encouragement to write books
  - Encouragement to develop application notes
- c) *Percentage of faculty*
  - \* invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies – 17%
  - \* participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies - 75%
  - \* presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies – 20%
  - \* *Periodic review/ monitoring by Senior faculty*

The senior faculty members are asked to train the junior faculty members for increasing the effectiveness of teaching and learning process. They also visit the class and give their feedback to the junior faculty members.

**2.4.4 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized programmes industrial engagement etc.)**

- Incentives for possessing Ph.D qualification and sponsorship for pursuing Ph.D in full time or part time mode.
- Less work load for faculty pursuing Ph.D and innovative research Facilitation to pursue research work by procuring necessary equipment, software etc.
- Faculty possessing UG qualification are encouraged to pursue their PG to comply with the AICTE rules and regulation.
- Faculty are encouraged to attend FDP/STTP/Seminar/Workshop etc and they are also sponsored to attend conferences both domestic and international. Sponsorship to publish papers in national, International journals and conferences.
- Under the faculty exchange programme Dr.N.Meyyappan has been sponsored to visit London South Bank University. Dr.A.Venkatesan was given sabbatical leave for a period of two years to work in Caledonian College of Engineering, Sultanate of Oman, Muscat for acquiring international exposure.
- Incentives to the faculty based on the university results in recognition of their hard and dedicated efforts.
- Cash award for best presentation on research Publications.
- Cash award for best presentation on research day.

**2.4.5 Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance/achievement of the faculty.**

- As Mark of respect to the Legendary Mathematician **SRI S Ramanujan** on his 125<sup>th</sup> Birth Anniversary, our Honorable Prime Minister **Dr Manmohan Singh** announced this year as year of Mathematicians. The cricket Federation of India and AMN Global project jointly conducted under-17 all India cricket league championship in four different venues. The organizers are planned to honor 2012 Mathematicians. **Ten members** of our department are honored by our Hon. Governor of Tamil Nadu **Dr.Rosaiah**, during the closing ceremony at Singaram Pillai School grounds, Villivakkam on 29.4.2012. The Award includes a certificate and silver medal from the organizers.
- The organizers are also planned to honor top 3 Mathematicians from their enrollment forms. Dr R Muthucumaraswamy, Professor & Head, received the award for second position (out of top three Mathematicians) from the Governor of Tamilnadu, during the closing ceremony at Singaram Pillai School grounds, Villivakkam on 29.4.2012 at 4.30 pm. **The award carries certificate, silver medal and Gold coated cup.**
- National Maritime Day Celebrations Committee, Chennai presented Felicitation Award to **Prof.K.V.Sivanarayana (Department of Marine Engineering)** at the World Maritime day celebrations held on 25th September 2012 in recognition of his outstanding contribution to the shipping industry. The award was given by the Principal Officer, Mercantile Marine Department, Ministry of Shipping, Government of India.
- Dr. S. Prabhu and Dr. E. Nakkeeran received Marquis “who is who” award from an international Committee during the year 2010 and 2012 respectively. Cash incentives are given to the faculty members who publish research and review papers in national and international journals.
- Dr. N.Muthukrishnan (HoD, Automobile Engineering)) and Prof. Dr.S.Saravanan (Automobile Engineering) were included in marquis “who is who” in the world. Dr. N.Muthukrishnan is also editorial member in the two international journals and Prof.Dr.S.Saravanan reviewer for international journals.

The Institution provide the following

- The faculty members are encouraged to participate in the conference and workshops both at national and international level. They are given OD for participation and also TA/DA.
- Faculty provided with PC and internet facility in the department.

- Wi-Fi connection in the campus for all. Access to large number of on-line journals.
- Annual subscription for professional memberships, upto Rs.1000/-.
- The academic ambience in the campus contributes largely to more such achievements.

**2.4.6 Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?**

- ❖ Yes. A feedback system by the students is in vogue and faculty members with excellent feedback are motivated by way of increments through the application of reward points while preparing the performance appraisal. The format is as follows:

	Name of the Faculty member: Subject Name and Code: Please read the lines below as” The Teacher...”	Excellent	Very Good	Good	Fair	Poor
1	Comes to the class on time.	5	4	3	2	1
2	Comes well prepared in the subject.	5	4	3	2	1
3	Engages classes regularly and maintains discipline.	5	4	3	2	1
4	Speaks clearly and audibly, and writes and draws legibly.	5	4	3	2	1
5	Covers all the topics on time.	5	4	3	2	1
6	Offers timely assistance and counseling to the students.	5	4	3	2	1
7	Asks questions to promote interaction and reflective thinking.	5	4	3	2	1
8	Explains clearly and effectively the concepts/principles with appropriate examples.	5	4	3	2	1
9	Encourages, compliments and praises originality and creativity displayed by students.	5	4	3	2	1
10	Is courteous and unbiased in dealing with the students.	5	4	3	2	1

- ❖ Lecture classes are monitored by senior Professors, Dean Educational development and the HoD of the Department. They give constructive comments to improve the quality of teaching and the teaching- learning process.
- ❖ Counseling by the respective HoD for those faculty member who have secured low scores and negative comments, if any, in the feedback. This motivates them to improve their skills and abilities.

- ❖ If required training /orientation programmes are conducted by professional experts to hone the skills of the faculty members in the nuances of teaching, thus improving the efficacy of teaching-learning process.

## **2.5 EVALUATION PROCESS AND REFORMS**

### **2.5.1 How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?**

The stakeholders are ensured of the evaluation process by the following means:

- Display test circulars in college website ([www.svce.ac.in](http://www.svce.ac.in)), notice board and Calendar.
- Information through sms.
- Maintaining hard copy records and access to the same by students and faculty when required.
- The evaluation process is discussed thoroughly in the staff council meeting and the required changes are brought in and informed to the students and the faculty.
- Faculty were also made aware of the information about CAT through circular and e-mail

### **2.5.2 What are the major evaluation reforms of the university that the institution has adopted and what are the reforms initiated by the institution on its own?**

The University constitutes a board of examiners separately for central valuation of each category (for various sciences, for humanities and for various engineering and technology disciplines) consisting of a Chairman, Chief Examiners and Examiners.

The University also provides for revaluation of the answer scripts as well as supplying Xerox copies of the evaluated answer scripts. On the recommendations of HOD and Principal, the answer scripts of University examinations are revalued by the University. In case the student is not satisfied with the outcome of the revaluation or the marks obtained by him, university has a provision to go in for a CHALLENGE. However the marks obtained by the student will be the best of all the above.

The institution continuously reviews the evaluation process done internally and necessary changes as and when applicable/ required are implemented. Though only three internal assessments is required as per the affiliating university, the college has been experimenting the evaluation process with daily test / five continuous test and a three hour model exam as per the end semester examination conducted by the university.

In addition to the above, regular assignments are also part of the evaluation process.

**2.5.3 How does the institution ensure effective implementation of the evaluation reforms of the university and those initiated by the institution on its own?**

For the effective implementation of the reforms advised by the university, the college has an exclusive Dean (Examinations) for the conduct of all the CAT. Question papers are set by different faculty (2 in nos) and handed over to Dean (Examinations) much in advance and the Dean has got the authority to choose one of the question papers and also to mix the question papers as is the practice in the University. The question papers are opened in front of the students just before the commencement of the examinations. The Dean (Examination) will supervise giving CAT examination and the Staff Council will review the activities related to the CAT examinations.

The internal assessment marks are generated centrally by the IMS (Information Management System) department using softwares based on daily attendance entered by the respective faculty and the marks obtained by the student in all the tests. The results are analysed and reviewed by the HoD so as to plan and execute corrective actions, if any. The above method ensures a fool proof method of implementation of evaluation reforms.

**2.5.4 Provide details on the formative and summative evaluation approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.**

The college was conducting three / five continuous test across the semesters till the academic year 2011 – 12. From the year 2012-13, one of the CATs was modified as daily test throughout the semester covering fraction of the syllabus. This led to a comprehensive formative assessment throughout the semester. A three hour test like university pattern is being conducted after the completion of 80% of the syllabus and the remaining 20% is covered in the last CAT for a period of 1 ½ hours. Hence the entire syllabus was adequately covered and the performances of the students are evaluated. The impact of the above changes has manifested in the improved the pass percentage by about 5 – 6%.

**2.5.5 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of the course/ programme? Provide an analysis of the students results/achievements (Programme/ course wise for last four years) and explain the differences if any and patterns of achievement across the programmes/courses offered.**

Hard copy of the progress report indicating University marks, performance in the recent CAT and the attendance % are sent to the parents through post every semester. It is made compulsory that the student should get the signature of the parent/ guardian and resubmit the same to the faculty advisor. The remaining CAT marks are sent by sms and the underperforming students parents are informed by the faculty advisor over phone and if necessary they are called to meet the HoD. During the interaction with the faculty advisor and the HoD, steps to correct and improve the performance of the student are



thoroughly discussed with the parent and the student. The same will be implemented and progress is monitored.

The following table explicitly indicates the analysis of the students pass % for the last four years and the achievements (university ranks) by the students.

Branch	2009	2010	2011	2012
AE	79	77	59.38	71.4
BT	98	90	87.79	100
CE	Started during 2007		54.74	77.4
CH	98	97	84.91	91
CS	86	89	67.45	80
EC	84	90	74.27	90.44
EE	91	92	74.9	83
IT	88	88	65.66	75.2
MR	77	96	85.44	91.3
ME	91	88	72.8	85.71
Overall	88	90	72.7	84.5

University ranks secured by the U.G students is as follows

Year	No.of Ranks
2009	16
2010	19
2011	22
2012	52

University ranks secured by the P.G students is as follows

Year	No.of Ranks
2009	-
2010	3
2011	8
2012	7

The pass percentage for the P.G Programmes conducted at SVCE during the past 4 years is given below.

M.E COM – Communication Engg, M.E PED – Power Electronics and drives, M.E C.C- Computer and Communication Engg, M.E CAD- Computer Aided Design, M.E CSE – Computer Science and Engg, MCA – Master of Computer Application

\*Biotech & M.E C.C course started in the year 2010.

Branch	2009	2010	2011	2012
BT	*			100
M.E COM	95	100	100	100
M.E PED	83	100	86	100
M.E C.C	*			100
M.E CAD	33	100	91	100
M.E CS	95	100	92	95.24
MCA	95	100	87	100

This practice is made known to the Parents/Students during the orientation programme for the first year students before reopening of the college and in the subsequent parent teacher meeting also.

**2.5.6 Detail on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioral aspects, independent learning, communication skills etc.**

Internal marks are strictly based on the internal assessment test and the attendance secured by the student. Our internal assessment and the performance of the students in the university had been found matching closely. Being an affiliated college, we strictly follow the norms mandated by the university.

Behavioral issues are thoroughly enquired by a committee comprising a senior professor along with Dean (Student Welfare) and appropriate actions as approved by the staff council are taken. It is also communicated to the university and to the parents.

The curriculum takes care of the communication skills by way of conducting Communication Lab in the fifth semester for all branches of engineering and it is given 3 credits.

The college has one of the most sophisticated communication labs and CTS has appreciated our efforts and provided a grant of Rs.3.0 lakhs to setup an additional lab.

**2.5.7 Does the institution and individual teachers use assessment/evaluation as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.**

Yes. Assessment and evaluation determine the award of internal marks. This in turn, has a direct impact on the university grade obtained by the student. The evaluation process is indicative of the achievement of learning objectives. If there is any downtrend in the evaluation, corrective remedial measures to the students by way of special classes, extra counseling, etc are taken before further deterioration happens. The Faculty Advisor who is in charge of 20 students starting from the first year ensures that the student passes out with flying colors by helping him overcome inhibitions if any, and getting the best out of him. Indication of students' performance and the general weakness in any subject as well as the problem of the students in a particular subject and the ability of the faculty to clearly deliver are discussed in the class committee meetings conducted two to three times every semester. Bright as well as average students are selected from each section to be part of the class committee meetings. This has definitely improved the teaching-learning process and any short comings on either side are immediately attended to.

We conduct special classes for the students who failed in the CAT examinations the effect of this is evident from the improvement in pass percentage in the difficult papers such as Engineering Graphics and Maths. It

is also to be noted that the review classes before exam were conducted for subjects like Fundamentals of Computing.

### **2.5.8 What are the mechanisms for redressal of grievances with reference to evaluation both at the college and University level?**

#### **At the college level:**

- Students have access to the internal marks awarded. Internal marks are displayed in the notice board to enable discussion with the subject teacher / Faculty Advisor and the HoD in the case of any disagreement.
- Genuine cases are given due consideration while awarding internal marks.
- Genuine absentees and failures are given assignments and re-test so as to help them score better internal marks.

#### **At University level:**

- The University allows the students to apply for reevaluation of the paper and to get xerox copies of the answer scripts so that they can be assessed by a teacher for the subject of his choice and to go in for challenge both for passing and betterment of marks.

## **2.6 STUDENT PERFORMANCE AND LEARNING OUTCOMES**

### **2.6.1 Does the college have clearly stated learning outcomes? If 'yes' give details on how the students and staff are made aware of these?**

The lesson plan has the specific learning outcome. Lesson plan are prepared for every subject including laboratory and the same is displayed in the college website under the student link. Lesson plan are reviewed by the concerned HOD to ensure the objectives are met with.

During the interaction with the students in the Class Committee meeting the objectives of each subject are explained by the respective faculty handling the subject and the Chairperson of the meeting. The expected outcome from the student is also explained clearly

### **2.6.2 How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?**

The teaching learning and assignment strategies that are followed by the institution are structured in the form of processes under ISO 9001:2008.

To compulsorily conduct the classes for the stipulated number of days by compensating for any intended / un intended holidays

Periodic reviews, feedback to keep track of the course of achievement of learning outcomes identify deviations if any and take corrective action on an individual as well as on the course basis. Materials are prepared for each learning outcome and given to students. Evaluation through test ensures that the outcomes are fully achieved.

**2.6.3 What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (quality Jobs, entrepreneurship, innovation and research aptitude) of the courses offered?**

- Training in communication and other quantitative aptitude skill development
- To conduct Presentation skills and technical seminar course to its true spirit
- Training in the technical subject aptitude through comprehension test so that the student will get an exposure to appear for the GATE examination
- Students are encouraged to become a member of EDC-Entrepreneurship Development Centre to aspire for an entrepreneur, other students are encouraged to attend seminar/ workshops/guest-lectures arranged under the aegis of EDU.
- Conducting technical symposium, competitions to express student's of their innovative ideas
- Sponsorship to present/publish research papers in international conferences and journals.
- Encouragement to take up mini projects of social relevance where in innovation is an integral part and offering financial assistance for the successful completion of these types of project works.

**2.6.4 How does the institution collect and analyse data on student learning outcomes and use it for planning and overcoming barriers of learning?**

- The Information Management System (IMS) department plays a pivotal role in the collection and analysis of student academic performances for decision making.
- Discussion in the ISO Academic objectives meetings.
- Discussion in the fortnightly meeting by the principal with the heads of the departments that will help in the effective planning thus aiding in overcoming the barriers of learning.

**2.6.5 How does the institution monitor and ensure the achievement of learning outcomes**

- ❖ Through periodic assessment
- ❖ Through student feedback
- ❖ Through monitoring of lecturing process by peers or seniors
- ❖ Identification of reasons through periodic review meetings in the following avenues
  - Class Committee meetings
  - Department meetings through stay back on Tuesday/ holidays
  - Class counseling sessions on Tuesdays by way of staying back.

- ISO Academic objective meeting convened every month
- Through result analysis and discussion by Dean (Academics)
- Fortnightly meeting by the Principal with the heads of the various departments and the Deans for various activities.
- ❖ Corrective action through
  - Special Classes
  - Vis-a-vis Counseling involving parents and student concerned
  - Remedial teaching for the weak students.
  - Personalized coaching on holidays and also by evening stay back

**2.6.6 What are the graduate attributes specified by the college/affiliating university? How does the college ensure the attainment of these by the students?**

<b>Graduate Attributes</b>	<b>Achieved Through</b>
To create a passion to pursue research	<ol style="list-style-type: none"> <li>1. Encouraging students to pursue mini research projects, publication of research findings in conferences, seminars, Journals and encouragement for the same through sponsorship of financial assistance etc.</li> <li>2. Conducting workshops, Seminars/Lectures to enhance the research activity awareness and to motivate more students to carry out research.</li> <li>3. Conducting competitions to highlight the research activities carried out by students.</li> <li>4. Cash awards for Best Students Projects.</li> </ol>
Entrepreneurship	<ol style="list-style-type: none"> <li>1. To provide assistance to aspiring student entrepreneurs through the EDC-Entrepreneurship Development Cell of the College</li> <li>2. To impart awareness programmes under the aegis of EDC- Entrepreneurship Development Cell, by way of workshops/Seminars/Expert Lectures.</li> </ol>
Employable/Industry ready Graduates	<p>Industry- Institute interaction cell in all the departments.</p> <p>Training by industry experts in the following areas</p> <ul style="list-style-type: none"> <li>➤ Communication skills development</li> <li>➤ Soft skills development</li> <li>➤ Technical competency development</li> <li>➤ Placement training by way of mock interviews, group discussions, Panel discussions etc.,</li> </ul>
Inculcating ethical values and environmental awareness	<ol style="list-style-type: none"> <li>1. By offering courses on these subjects</li> <li>2. Awareness programme through guest lecture/NSS/Student club activities</li> <li>3. Field study and Field work through the various student clubs like NCC, NSS.</li> </ol>

### CRITERION III : RESEARCH, CONSULTANCY & EXTENSION

#### 3.1 PROMOTION OF RESEARCH

##### 3.1.1 Does the institution have recognized research center/s of the affiliating University or any other agency/organization?

Yes, Out of 15 departments, the following departments of our institution are currently functioning as approved research centers under the affiliating university

S. No	Department
1	Applied Chemistry
2	Applied Mathematics
3	Applied Physics
4	Bio Technology
5	Chemical Engineering
6	Computer Science & Engineering
7	Electronics & Communication Engineering
8	Electrical & Electronics Engineering
9	Humanities & Social Sciences
10	Information Technology
11	Mechanical Engineering

##### 3.1.2 Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition? Mention a few recommendations made by the committee for implementation and their impact.

Yes, Our institution is having dedicated team of research committee in all departments headed by Dr.R.Ramachandran, Director-Research and it is very active in guiding both faculty and students to pursue research in leading edge technologies. Research Director may constitute a research advisory committee at the college level with outside experts.

A senior teaching faculty member in the department will be nominated as Research Objective Leader to represent the department research related issues to management

Impact of the recommendations of research committee:

- Departments developed its own research lab facility to expedite research activities
- Many faculty members and students encouraged to attend national / international conferences
- Departments sponsored good number of faculty members for a national /international level technical events, workshops, FDPs, Seminars etc.,

- A good number of National / International Conferences, Workshops, FDPs are regularly being organized to update our knowledge on par with industry standards
- Cash award provided for research publication by faculty members for both national / international journal publication
- Guided the faculty members for getting the funded project and the required motivation is given for implementing the funded projects
- Sabbatical leave is provided with full motivation for the faculty members to pursue doctoral studies
- Regular technical talks / interactions are being organized in latest research topics by Director-Research for involving younger faculty members to pursue research
- Entertaining faculty Members for industrial consultancy projects in their field of expertise through Industry Institute Interaction Cell
- Maintaining the research status from Anna University by publishing at least 2 quality research papers in national or international journal.
- Working to receive at least one externally funded project per department
- To attend at least one research seminal/symposia/workshop by every member of the faculty
- To mentor at least 2 graduate students to do research and subsequently to publish at least 2 papers in journal.
- To guide research scholars in line with university requirements

### **3.1.3 What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes/projects?**

This institute has state of art research facilities to help students and faculty to pursue research. The research cell of the department gives required guidance / support for getting research projects and also to complete the research assignments within the scheduled time. The principal investigator of funded projects encouraged in all aspects to complete the projects.

The institution offers full freedom to make them to feel fully comfortable while executing the project. The possible reduction is also done in their teaching load so that they will readily submit the deliverables within the accepted time. College management continuously motivates students and faculty members for presenting their paper work in international conferences with full sponsorships.

### **3.1.4 What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?**

College regularly conducts seminars, guest lectures, conferences & technical symposium etc., for the benefit of both students and faculty members. They do interact with resource persons during the above events and develop their

knowledge for doing the research. Faculty members are positive minded to share their technical exposure / specialized knowledge to other faculty members in a monthly discussion which is being conducted by management in the name of subject interest group (SIG). Faculty members are constantly motivated to acquire higher qualifications with full support by providing necessary sabbatical leave and the required sponsorship.

**3.1.5 Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative research activity, etc.**

A good number of research scholars are being successfully guided by our senior faculty members and the details are given below:

S.No	Name of the Faculty Member	Dept	No of research scholars	
			Full Time	Part time
1).	Dr.N.Muthu krishnan	AE		6
2).	Prof. M.Sivanandham	BT	2	4
3).	Prof. Sulochana Somasundaram		1	1
4).	Dr.R.Parthiban	CH		4
5).	Dr Susan Elias	CS		2
6).	Dr. M. Gopalakrishnan	EE		4
7).	Dr. KR. Santha			4
8).	Dr.G.Sumathi	IT		4
9).	Dr. N. Kumaratharan		1	4
10).	Dr. A.Venkatesan	ME		2
11).	Dr. R.Ramesh			5
12).	Dr. K.Pithandi			3
13).	Dr. J. Venkatesan			2
14).	Dr. R. Muthucumaraswamy	AM		12
15).	Dr. B. Thilaka		1	
16).	Dr. D. Meiyappan			1
17).	Dr. A.R. Vijayalakshmi			4
18).	Dr.S.Sampathkrishnan	AP	2	3
19).	Dr.A.Bhaskaran			2
20).	Dr.S.Muthu			2
21).	Dr.S.Selvakumar	AC		1
22).	Dr.S.Jegannathan	AC		2
23).	Dr.S.Stanly			3
24).	Dr.G.Baskar			3
25).	Dr.B.Senthil Sivakumar			1
26).	Dr.B.Senthil Sivakumar			1
27).	Dr.M.Thirumalaikumar			1



High end technical research is being carried out by our faculty members in association with various industrial organizations and the list is furnished below highlighting the major activities

<b>Collaborative Research by faculty</b>	<b>Dept</b>	<b>Area of Research</b>	<b>Organisation associated</b>	<b>Amount Received Rupees</b>
Dr.S.Saravanan	AE	IC Engines	M/S Gates Unitta (India) Ltd	480000
Dr Susan Elias, Ms.R.Vanaja	CS	Networks	DRDO	2464000
Dr.Susan Elias	CS	Multimedia	DRDO	700000
Mr.P.C.Kishore Raja, Mr.M.Ravichandran	CS	Networks	DRDO	670000
Dr. J. Venkatesan Mr. R. Murugan	ME	Modelling of NLC 1 Compressor (2008)	WABCO-TVS India Ltd, Chennai	100000
Dr. J. Venkatesan Mr. R. Murugan	ME	Modelling of NLC 2 Compressor (2009)	WABCO-TVS India Ltd, Chennai	135000
Dr. R.Ramesh Mr. R.Murugan Mr.M.Premananth	ME	Design of Transportation Plate	MELSS Pvt Ltd Sriperumbudur	60000
Dr. J. Venkatesan	ME	Experimental work using AVL engine research centre	Research scholars, PG and UG students from various colleges in India	840000
Dr. J. Venkatesan Dr. R.Ramesh Mr. R.Murugan Mr.C.Senthamarai Kanann, Mr.M. Maheswaran	ME	Training for R&D Engineers	Western Thomson Ltd	24000

**3.1.6 Give details of workshops/ training programmes/ sensitization programmes conducted/organized by the institution with focus on capacity building in terms of research and imbining research culture among the staff and students.**

Large number of technical programs are being conducted in association with leading industrial organizations and the department wise activity list is provided below for the previous five years

Many technical programs are being fully sponsored by our management to encourage interaction with outside world and the departments wise activity list for the previous five years are given in the following table.

**Department of Automobile Engineering**

SI No	Title of the lecture in workshop / seminar etc	Date
1.	Under the roof of the cylinder head	23-24-Sep-2010
2.	Gaseous fuels for Automotive applications & Career in Automotive industries	28-Aug-2009
3.	Topology optimization and design under uncertainties for crashworthiness design”	12-Sep-2009.
4.	Transmission	22-Dec-2009.
5.	Heat Treatment	24-Feb-2010.
6.	CRDI engines	26-Mar-2010
7.	The Role of Engineering education in the growth of India	19-July-2010.
8.	Technology and sustainability	31-Aug-2010
9.	Advancement in diesel technology	3-Sep-2010
10.	Transmission systems	11-Oct-2010
11.	Basics of diesel engines & emission scenario	10-Jan-2011
12.	Investment castings	15-Feb-2011
13.	Lean manufacturing	23-Feb-2011
14.	Air Management systems	25-Feb-2011
15.	Alternate fuels-CNG & LPG	28-Feb-2011
16.	Virtual power train	28-Mar-2011
17.	Scope and Opportunities for Automobile Engineers	22-July-2011
18.	Challenges ahead for Automobile Engineers	17-Aug-2011
19.	Energy Scenario	22-Aug-2011
20.	Energy Scenario & Combustion and Burners	22-Aug-2011
21.	Modern trends in NVH	30-Sep-2011
22.	Automotive applications and data acquisition system	17-Feb-2012
23.	Quality practices in Automobile Industry	28-Feb-2012
24.	Emission norms and testing	8-Mar-2012
25.	Awareness on Product homologation requirements	14-Mar-2012
26.	How to design a career	28-Mar-2012
27.	Promising gaseous fuels for automotive applications	31-July-2012
28.	General talk on Automobile Engineering	24-Aug-2012
29.	Selected topics in theoretical Computer Science	25-8- 2009
30.	Selected topics in Computational Fluid Dynamics	9-10-2010
31.	Geometric Function Theory	26-3-2011
32.	Graph Theory – Introduction and its Applications	3-11-2012

**Department of Bio Technology:**

SI No	Title of the lecture in workshop / seminar etc	Date
1.	TNSCST Sponsored National level workshop entitled as “Recent Trends in instrumentation in Quality Control & Quality Assurance in Bioprocess Industries”	27-Sep-2010 to 28-Sep-2010
2.	eppendorf Sponsored National level workshop entitled as “Real-time PCR for the diagnosis of diseases and molecular evaluation	16-Feb- 2010 to 17-Feb-2010
3.	National level workshop entitled as “Phytoproducts for Human Health and Environmental Sustainability	27-Feb-2013 to 28-Feb-2013.
4.	National level workshop entitled as “Modern Biotechnological Approaches for Food Processing	13-Sep-2012 to 14-Sep-2012.
5.	National level Technical symposium entitled as “OMICS 2012	28-Aug- 2012
6.	National level conference entitled as “Emerging Trends in Environmental Biotechnology	28-Feb-2012.

7.	National level workshop entitled as “Current Trends in the Biotechnology of Vaccines	19-Oct-2011 to 20-Oct-2011.
8.	National level Technical symposium entitled as “OMICS 2011	16-Aug- 2011.
9.	National level workshop entitled as “Current Trends in Drug Design by Bioinformatics Tool	23-Feb-2011 to 24-Feb-2011.
10.	National level Technical symposium entitled as “OMICS 2010	30-Aug- 2010
11.	National level workshop entitled as “Recent Trends in Industrial Bioprocesses	10-Sep-2009 to 12-Sep-2009.
12.	National level Technical symposium entitled as “OMICS 2009”	02-Sep- 2009.
13.	SVCE Sponsored One day Workshop entitled as “CASE tools	05-Jan-2013.

#### **Department of Computer Application**

<b>Sl No</b>	<b>Title of the lecture in workshop / seminar etc</b>	<b>Date</b>
1.	SVCE Sponsored One day Workshop entitled as “NS2 Simulator”	18-Aug-2012.
2.	SVCE Sponsored Three day Workshop entitled as “Unix and Network Programming	05-Jan-2011 to 07-Jan-2011.
3.	CTS Sponsored National Conference entitled as “Machine Learning and Computing	12-May-2010.
4.	SVCE Sponsored FDP entitled as “A Practical approach to system software	23-Jan-2010 to 24-Jan-2010.
5.	SVCE Sponsored FDP entitled as “XML and Web Services	10- 11 Aug-2009
6.	SVCE-ISTE Sponsored Two day Workshop entitled as “A Practical Approach to Algorithms	28- 29 Jan-2009
7.	CTS-SVCE Sponsored Two day Workshop entitled as “Software Project Management	16- 17 Dec-2008
8.	SVCE Sponsored One day Workshop entitled as “Intellectual Property rights	29-July-2008.

#### **Department of Civil Engineering**

<b>Sl No</b>	<b>Title of the lecture in workshop / seminar etc</b>	<b>Date</b>
1.	Advances in Concrete Technology and Sustainable Materials	18-10-2012.
2.	One day technical symposium, “ARTIFEX 12	30-08-2012.
3.	One day technical symposium, “ARTIFEX 11	18-08-2011.
4.	Computer applications in civil engineering”	04/03/2010.
5.	Guest lecture on “Problematic soils and ground improvement techniques	29/07/2010.
6.	Guest lecture on “General aspects on soil engineering	23/02/2011.
7.	Foundation on expansive clays- Problems and remedial measures”	30/07/2011.
8.	Guest lecture Employability”	09/03/2012.
9.	Guest lecture on “Architecture for Civil Engineers”	09/03/2012.
10.	Guest lecture on “Opportunities for civil engineering students, valuation of assets,”	28/03/2012.
11.	Status of tank irrigation in Tamilnadu”	27/07/2012.
12.	Chennai Metro Rail	30/01/2013.
13.	IE (I) and benefits	31/01/2013.

**Department of Chemical Engineering**

SI No	Title of the lecture in workshop / seminar etc	Date
1.	Fertilizer industries in india – an overview	18 <sup>th</sup> January 2013.
2.	Interfacing chemical engineering and food processing	04 <sup>th</sup> February 2013.
3.	Spectrum of microwave applications in process industries	04 <sup>th</sup> March 2013.
4.	Space technology and chemical engineering	8 <sup>th</sup> March 2013.
5.	Chemical Safety and Fire Safety	14 <sup>th</sup> February 2012.
6.	Particle Technology for Process Industry	07 <sup>th</sup> March 2012.
7.	Scopes and Research Areas of Chemical Engineering	27 <sup>th</sup> March 2012.
8.	Chemical engineering challenges in 21 <sup>st</sup> century	18 <sup>th</sup> July 2012.
9.	Lecture on “Energy conservation”	28 <sup>th</sup> January 2011.
10.	Lecture on Fundamentals of process control	08 <sup>th</sup> January 2011.
11.	Lecture on Research opportunities in Chemical Engineering	08 <sup>th</sup> January 2011.
12.	Lecture on “Opportunities in climatic conditions”	11 <sup>th</sup> February 2011.
13.	Lecture on “Nano-porous materials-a perspective in industrial application”	08 <sup>th</sup> February 2011.
14.	Lecture on “Global warming”	05 <sup>th</sup> March 2011.
15.	Lecture on “Fundamentals of Chemical Engg”	25 <sup>th</sup> March 2011.
16.	lecture on “Opportunities in climatic conditions”	11 <sup>th</sup> February 2011.
17.	national conference on “Innovations in Process Engineering for sustainable development”	13 <sup>th</sup> & 14 <sup>th</sup> September 2012.
18.	workshop on “Recent trends in Process control, modeling and simulation”	28 <sup>th</sup> & 29 <sup>th</sup> July 2011.
19.	lecture on “Entrepreneur Opportunity in Polymer Industry”	8 <sup>th</sup> July 2011.
20.	A lecture on “Career Talk”	26 <sup>th</sup> July 2011.
21.	A lecture on “Pressure Safety Valve Design”	12 <sup>th</sup> October 2011.
22.	A lecture on “Process Design-An Introduction”	12 <sup>th</sup> October 2011.
23.	A lecture on “OPC-Functions in Oil & Gas sector”	10 <sup>th</sup> July 2010.
24.	A lecture on “Chemical engineering role in abrasive and refractory industry”	11 <sup>th</sup> January 2010.
25.	A seminar on “Paradigm shift in chemical engineering with special reference to oil, refinery and gas sectors”	3 <sup>rd</sup> & 4 <sup>th</sup> September 2010.
26.	A seminar on “Software tools and packages relevant to modern chemical and environmental engineering practices”	20 <sup>th</sup> & 21 <sup>st</sup> August 2009.

**Department of Computer Science & Engineering**

SI No	Title of the lecture in workshop / seminar etc	Date
1.	ISTE Sponsored National Level Workshop on the topic “VLSI systems-NWVLSIS2009”	13-March- 2009 & 14-March-2009.
2.	ISTE Sponsored National Level Conference entitled as “National Conference on Computers and Communication	Apr-2009.
3.	A Center of Faculty Development, Anna University Sponsored Faculty Development Training Programme on the topic “Artificial Intelligence”	14-Nov-2011 to 21-Nov-2011.
4.	One day workshop on the topic “Cloud Computing”	30-June-2009.
5.	One day workshop on the topic “Web Security”	13-Aug-2009.
6.	One day workshop on the topic “Theoretical Computer Science”	25-Aug-2009.
7.	One day workshop on the topic “Algorithm Analysis”	29-Oct-2009.
8.	Two days workshop on the topic “Python for Scientific Computing”	22 & 23 Apr-2010.

9.	A Faculty Development Programme on the topic “Open Source Software FDPOOSS2010”	8-Sept-2010.
10.	A one day workshop on the topic “Theory of Computation”	9-Oct-2010.
11.	One day workshop on the topic “JAVA/J2EE Technologies”	28-Dec-2010.
12.	Two days national workshop on the topic “Data Mining: A Research Perspective 2011”	24 & 25 Mar-2011.
13.	One day national workshop on the topic “Research methodology NWRM2011”	30-Mar-2011.
14.	One day workshop on the topic “Membrane Computing”	04-Aug-2011.
15.	Two days CDAC workshop on the topic “Cloud Computing”	7 & 8-Mar-2012.
16.	One day workshop on the topic “Android”	03-Sept-2012.
17.	One day workshop on the topic “Support Vector Machines”	15-Dec-2012.
18.	One day workshop on the topic “Android”	25-Jan-2013.
19.	One day workshop on the topic “NS2”	22-Feb-2013.
20.	One day workshop on the topic “HTML5/CSS3”	05-Mar-2013.

#### **Department of Electronics & Communication Engineering**

<b>Sl No</b>	<b>Title of the lecture in workshop / seminar etc</b>	<b>Date</b>
1.	National level workshop entitled as “Design and development of UWB components for wireless applications”	14 - 15 Sept 2012.
2.	A workshop on “Research Methodology and new directions in Signal Processing”	1 & 2 April,2013
3.	A FDP on the topic”Latest Trends in EDA Communication ,Electronics and VLSI Technology “in association with Trident TechLabs Pvt Ltd	13 <sup>th</sup> Feb 2013.
4.	Two day course on “Instrument servicing and recent technologies in Electronics and Communication field” for supporting staff	4 <sup>th</sup> and 5 <sup>th</sup> December 2012.
5.	A National Level Conference on the topic “Signal Processing, Communication and Networking”	3 - 4 April 2012
6.	Two day Workshop on “Latest Telecommunication Technology”	24 – 25 Feb 2012.
7.	Workshop on “Design and development of RF components and subsystems for communication applications”	9 March 2012.
8.	National conference on next generation communication systems and techniques	19 – 20 April 2011
9.	A “Workshop on emerging technologies in Telecommunication”	06 – 8 Jan 2011
10.	Workshop on FPGA design flow	3 – 4 Feb 2011
11.	A Seminar on ”Next generation Bio-Medical Electronic System“ in association with ISTE	23 <sup>th</sup> April 2009.
12.	Two day Workshop on “Mobile Computing and Communication”	29 – 30 Jan 2009.
13.	A National Level Conference on the topic “Signal Processing, Communication and Networking”	30 - 31 March 2009.
14.	A two day National Level Workshop on VLSI Systems in association with IEEE Student Chapter	March 2009
15.	one day National Level Workshop on Robotics in association with IEEE Student Chapter	March 2009
16.	National Level Conference on the topic “Signal Processing, Communication and Networking”	30 <sup>th</sup> and 31 <sup>st</sup> March 2010.

**Department of Electrical & Electronics Engineering:**

Sl No	Title of the lecture in workshop / seminar etc	Date
1.	National Level Conference entitled as “National Conference on Advances in Electrical and Electronics Engineering”	21-Jan-2010 and 22-Jan-2010
2.	National Level Conference entitled as “National Conference on Advances in Electrical and Electronics Engineering”	18-Feb-2011 and 19-Feb-2011
3.	National Level Conference entitled as “National Conference on Advances in Electrical and Electronics Engineering”	17-Feb-2012 and 18-Feb-2012
4.	Two day National Level Conference entitled as “National Conference on Advances in Electrical and Electronics Engineering”	01-Mar-2013 and 02-Mar-2013
5.	Two day workshop on the topic “LabVIEW based System Design”	24-Sep-2009 and 25-Sep-2009
6.	Four day workshop on the topic “Real Time Embedded System Design (Multidisciplinary)”	16-Jul-2010 to 19-Jul-2010
7.	One day workshop on the topic “Non-Conventional Energy Sources”	24-Aug-2010
8.	Two day workshop on the topic “Introduction to VLSI Design”	18-Mar-2011 and 19-Mar-2011
9.	One day workshop on the topic “Electrical Drawings, Types and Applications”	07-Jan-2012
10.	Two day workshop on the topic “Image Processing framework using FPGA”	03-Feb-2012 and 04-Feb-2012
11.	Two day workshop on the topic “PLC based SCADA Automation”	31-Aug-2012 and 01-Sep-2012
12.	Two day workshop on the topic “DSP System Design using TI Processor and FPGA”	19-Oct-2012 and 20-Oct-2012
13.	Two day workshop on the topic “Power Electronics Converters for Wind Energy Conversion Systems”	22-Feb-2013 and 23-Feb-2013
14.	One day guest lecture on the topic “Skill development”	28-Jul-2009
15.	One day guest lecture on the topic “Various measures for achieving industrial power quality”	20-Aug-2009
16.	One day guest lecture on the topic “Modern Economy and implementation of strategies”	30-Sep-2009
17.	One day guest lecture on the topic “Labview programming for engineer”	11-Sep-2009
18.	A one day guest lecture on the topic “Smart Grids”	24-Dec-2010
19.	One day guest lecture on the topic “Selection of Switch Gears (Industrial Lecture)”	11-Jan-2011
20.	One day guest lecture on the topic “Wonderful World of Microelectronics	23-Mar-2011
21.	One day guest lecture on topic “Role of Electrical Officers on Ship & Ship Board Life”	29-Mar-2011
22.	One day guest lecture on the topic “Evolution of Electric Traction”	23-Jul-2010
23.	One day guest lecture on the topic “Minimal RBF Neural Networks – Theory & Applications (Foreign Lecture)”	20-Aug-2010
24.	One day guest lecture on the topic “Role of Engineers in aiding sustainability of Human Race”	28-Aug-2010
25.	One day guest lecture on the topic “Electric Power & Telecom Scenario”	30-Mar-2012
26.	One day guest lecture on the topic “Research Areas in “VLSI Design”	12-Jan-2012

27.	One day guest lecture on the topic “Operation and Control of Power Systems”	13-Sep-2011
28.	One day guest lecture on the topic “To Achieve Excellence in Research and Development”	31-Aug-2011
29.	One day guest lecture on the topic “Renewable Energy and General Trends in Electrical Power”	02-Aug-2011
30.	One day guest lecture on the topic “Facts and its Applications”	17-Feb-2012
31.	One day guest lecture on the topic “Managerial Skills”	18-Feb-2012
32.	One day guest lecture on the topic “FPGA Implementation in Motor Control”	18-Feb-2012
33.	One day guest lecture on the topic “Power Optimization in Wireless sensor network”	26-Jul-2012
34.	One day guest lecture on the topic “HVDC and FACTS in ABB Pvt. Ltd.”	27-Aug-2012
35.	One day guest lecture on the topic “Microprocessors and Interfacing”	15-Oct-2012
36.	One day guest lecture on the topic “Control Circuit Design with AUTOCAD Electrical”	18-Feb-2013
37.	One day guest lecture on the topic “Introduction to Neural networks”	23-Feb-2013

**Department of Information Technology:**

Sl No	Title of the lecture in workshop / seminar etc	Date
1.	A technical lecture on "Cloud Computing"	30 <sup>th</sup> –July- 2012
2.	A technical lecture on " Recent Trends in IT industry	23 <sup>th</sup> August 2012
3.	A technical lecture on “Ethical Hacking and Computer Forensics"	15 <sup>th</sup> October 2012
4.	Ten day workshop on the topic “Ethical Hacking”	11 – 21 Dec 2012
5.	A seminar on “Higher Education in Germany”	11 <sup>th</sup> January 2013
6.	Three day workshop on the topic “IBM Tivoli”	18 – 21 Jan-2013
7.	One day workshop on the topic “Microsoft Azure App Development”	5 <sup>th</sup> –Feb-2013
8.	Three day workshop on the topic “Service oriented Architecture”	11 <sup>th</sup> -June-2011.
9.	Three day workshop on the topic “IBM DB2 2011”	15 - 17 July 2011
10.	A technical lecture on “Disaster Recovery and Rehearsal in Information Technology”	27 <sup>th</sup> -July- 2011.
11.	A technical lecture on “Modeling and Simulation”	16 <sup>th</sup> - August -2011
12.	A technical lecture on " Recent Trends in IT industry "	29 <sup>th</sup> -September-2011
13.	A technical lecture on "Digital Commerce in the Retail Industry"	25 <sup>th</sup> - January -2012
14.	A technical lecture on "Distributed Computing"	26 <sup>th</sup> – March - 2012.
15.	A technical lecture on "Cloud Computing"	12 <sup>th</sup> April 2012.
16.	A TADHCO and Anna University sponsored seminar on the topic “Enhancing employability of SC/ST students”	21 <sup>st</sup> to June 15 <sup>th</sup> - 2010
17.	A technical lecture on " IT in Supply Chain "	22 <sup>nd</sup> -July-2010.
18.	A three day workshop on the topic “ Database-2(DB2 2010)”	6 <sup>th</sup> to 8 <sup>th</sup> Aug -2010
19.	A technical lecture on the topic “Network Security & Ethical Hacking”	21 <sup>st</sup> Feb-2011
20.	A four day workshop on the topic “IBM-Rational Application Developer”	13 <sup>th</sup> to 16 <sup>th</sup> -April- 2010

21.	A four day workshop on the topic "Rational Functional Tester	11 <sup>th</sup> to 14 <sup>th</sup> -Feb-2011
22.	A technical lecture on " Trends and Careers in IT"	13 <sup>th</sup> - Aug 2010.
23.	A technical lecture on " Cloud Computing"	11 <sup>th</sup> Oct 2010.
24.	A technical lecture on "Role of IT in Media and Entertainment"	25 <sup>th</sup> -Jan-2011.
25.	A technical lecture on "Network Security and Ethical Hacking	21 <sup>st</sup> -February -2011.
26.	A technical lecture on "Data mining techniques"	13 <sup>th</sup> April-2009.
27.	Two day National Conference on "Communications & Informatics (NCCI 2009) "	5 <sup>th</sup> & 6 <sup>th</sup> -May- 2009.
28.	A technical lecture on " Software Testing - An Overview "	24 <sup>th</sup> July-2009.
29.	A technical lecture on " Smarter Planet "	4 <sup>th</sup> August-2009.
30.	A one day workshop on the topic"Service Oriented Architecture and Web Development"	27 <sup>th</sup> -Aug- 2009
31.	A technical lecture on " Green Computing "	2 <sup>th</sup> -september-2009.
32.	A one day workshop on the topic" High Performance Computing and Applications"	10 <sup>th</sup> -Sep- 2009
33.	A three day workshop on the topic "IBM workshop on Database 2"	12 <sup>th</sup> to 14 <sup>th</sup> -sep- 2009
34.	A technical lecture on " Information Security on BPO's "	6 <sup>th</sup> - January-2010.
35.	A technical lecture on " Future Computing Technologies "	27 <sup>th</sup> -March-2010.
36.	National Conference on "Communications & Informatics	9 <sup>th</sup> & 10 <sup>th</sup> -April- 2010

**Department of Mechanical Engineering:**

Sl No	Title of the lecture in workshop / seminar etc	Date
1.	International Conference on 'Modern Trends in Material Technology'	19 <sup>th</sup> and 20 <sup>th</sup> January 2009
2.	National level Workshop on " State of art in the development of Bio-fuels"	12 <sup>th</sup> & 13 <sup>th</sup> February 2009
3.	Two day workshop on "Recent advances in design engineering"	04 <sup>th</sup> & 05 <sup>th</sup> September 2009
4.	Two day course on "Emerging Trends in Supply Chain management"	18 <sup>th</sup> & 19 <sup>th</sup> September 2009
5.	Seminar on "Noise, Vibrations and Harshness"	05 <sup>th</sup> to 12 <sup>th</sup> June 2010
6.	One day workshop on "Nano Materials"	August 21, 2010
7.	A course in "Research methodology"	30 <sup>th</sup> March 2011
8.	National Conference on "Research Perspectives in Mechanical Engineering"	1 <sup>st</sup> and 2 <sup>nd</sup> April 2011
9.	Automotive Exhaust systems & NVH	23 - 30 July 2011
10.	SAP as ERP tool	16/09/2011
11.	One day workshop was conducted on Quality- case studies of different industries	24th Jan 2012
12.	Latest Advancement in Automotive Testing	12-03-12
13.	One day workshop was conducted on "Trends in Robotics" by Japanese firm	19th March 2012
14.	Two day workshop on Mechanical Behaviour of Composite Materials	30-03-12 to 31-03-12
15.	Workshop on "Simulation, Measurements & Condition Monitoring"	7 <sup>th</sup> September 12
16.	Workshop on "Recent trends in Engineering Tribology and Surface Characterization"	29 <sup>th</sup> September 12



### 3.1.7 Provide details of prioritised research areas and the expertise available with the institution.

As mentioned earlier, many departments have research centre facility and the faculty members of this institution also actively involved in research. The table below gives the department wise faculty specialisation. All of them are guiding the final year's student's projects / paper work in these areas apart from guiding research scholars from other institutions / industries.

#### Faculty – Specialization

S.No	Name of the Faculty	Subject	Specialization
1	Dr.G.Devasagayam	Chemistry	Catalysis
2	Dr.S.Selvakumar	Chemistry	Industrial Catalysis
3	Dr.S.Jegannathan	Chemistry	Applied Electrochemistry
4	Dr.S.Stanly	Chemistry	Environmental Chemistry
5	Dr.G.Baskar	Chemistry	Organic Chemistry
6	Dr.B.Senthil Sivakumar	Chemistry	Metal-Organic Chemistry
7	Dr.M.Thirumalaikumar	Chemistry	Organic Chemistry
8	Mrs.B.Preetha	Chemistry	General Chemistry
9	Mr.N.Nachiappan	Chemistry	Industrial Chemistry
10	Ms.S.Karthika	Chemistry	Electrochemistry
11	Dr.N.Muthukrishnan	Metal Cutting And Machining	Metal Cutting, Composites Machining,
12	Dr.S.Saravanan	IC Engines	Bio Diesel
13	V.Ganesh	Automobile Engineering	Design Of Automotive Components
14	S.Premnath	Automobile Engineering	IC Engines
15	S.Muniraj	Machining/ Manufacturing	CAD/CAM
16	Dr.R.Muthucumaraswamy	Mathematics	Theoretical and Computational Fluid Dynamics
17	Dr.B.Thilaka	Mathematics	Stochastic Processes
18	Dr.D.Meiyappan	Mathematics	Fuzzy Game Theory
19	Dr.A.R.Vijayalakshmi	Mathematics	Theoretical And Computational Fluid Dynamics
20	Dr.T.Kulandaivel	Mathematics	Theoretical & CFD
21	Dr. B Srutha Keerthi	Mathematics	Complex Analysis
22	Ms.Tina Lal	Mathematics	Fluid Dynamics
23	Mr.M. Radhakrishnan	Mathematics	Theoretical Fluid Dynamics
24	Ms.V.Valliammal	Mathematics	Fluid Dynamics
25	Mr.B.Saravanan	Mathematics	CFD
26	Ms.A.Suba	Mathematics	Fluid Dynamics
27	Dr. G. Sathesh Kumar	Mathematics	Algebra
28	Ms. E Subha	Mathematics	Graph Theory
29	Ms. K. Vijayalakshmi	Mathematics	CFD
30	Dr.R. Umadevi	Mathematics	CFD
31	Ms.P. Thenmozhi	Mathematics	Algebra
32	Dr.S.Sampathkrishnan	Physics	Spectroscopy, Material Science
33	Dr.A.Bhaskaran	Physics	Environmental Science

S.No	Name of the Faculty	Subject	Specialization
34	Dr.A.Anandavadivel	Physics	Dielectric ,Radiation Physics
35	Dr.S.Muthu	Physics	Spectroscopy, Material Science
36	Dr.K.Raju	Physics	Ultrasonics, Spectroscopy
37	Ms.N.R.Sheela	Physics	Spectroscopy, Computational Material Science
38	Ms.G.Bharathy	Physics	Spectroscopy, Crystalline Physics
39	Ms. S.Kalpana	Physics	Thin Film
40	Dr. Muthukumaran Sivanandham	Biochemistry	Immunotechnology Genetic Engineering Molecular Biology
41	Dr. Sulochana Somasundaram	Microbiology	Microbiology & Molecular Biology
42	Dr.S. Prabhu	Biochemistry	Biochemistry Bioorganic Chemistry
43	Dr. E. Nakkeeran	Biotechnology	Bioprocess Engineering Downstream Processing
44	Dr. Nalinkanth V Ghone	Biomedical Engineering	Biomaterials Nanomedicine
45	Ms. V Sumitha	Industrial Biotechnology	Bioprocessing , Bioseperations
46	Ms. Pandi Prabha. S	Industrial Biotechnology	Environmental Biotechnology
47	Dr.N.Karpagam	Plant Biotechnology	Plant Biotechnology
48	Mr.P.K.Praveen Kumar	Biopharmaceutical Technology	Bioinformatics & Chemical Engineering
49	Ms.P.Jaibiba	Microbial Technology	Food Processing And Microbial Technology
50	Mr.Hariharan	Biotechnology	Genetic Engineering, Molecular Biology
51	Mr.N.Sathish	Biotechnology	Environmental Biotechnology
52	Mr.S.Nagavignesh	Biopharmaceutical Technology	Computational Biology
53	Mr.R.Manikandan	Biopharmaceutical Technology	Metabolic Engineering, Protein And Enzyme Engg
54	Ms.Anjana anand	Biotechnology	Immunology And Molecular Biology
55	Ms.V.S.Padma @ Dhivya	Biotechnology	Genetic Engineering
56	Dr. M. Jayamala	Numerical Methods, Discrete Mathematics,	Complex Analysis
57	S.Raju	Oop, Operating Systems & Algorithms,	Software Engineering - Data Mining
58	P. Janarthanan	OS, Computer Organization,	OS And Data Mining
59	KR Ramkumar	Data Structures, Analysis Of Algorithm,	Data Structures, Routing Algorithms
60	S Uvaraj Arutkumaran	Software Engineering, Software	Ooad, Dbms, Supply Chain Management, Computer

S.No	Name of the Faculty	Subject	Specialization
61	N Rajeswari	Operating Systems, Problem Solving In C,	Data Structures
62	K Srinivasan	Unix And N/W Programming,	Web Technology
63	E Rajalakshmi	Analysis Of Algorithms, Computer Graphics	System Software, J2ee
64	T Padmavathy	Oops, Visual Programming, Micro Processors,	Programming Language
65	R Bhuvaneswari	OOPS, Problem Solving In C	Pattern Recognition
66	N Jayalakshmi	Dbms, Oops, Os, System Software	Data Mining
67	S. Muthurajkumar	Data Structures,	Cloud Computing
68	S. Jerusha	Computer Networks, Cryptography And Network Security	Wireless Sensor Networks
69	B Nagendra Kumar	Hydraulics	Hydrodynamics, Hydraulics, Ports and Harbours
70	C G Hemamalini	Hydraulics	Hydrology And Ground Water Pollution
71	V Tamizhselvi	Construction Engineering	Material Behaviour Engineering, Corrosion Control
72	P Sangeetha	Structural Engineering	Steel Concrete Composite Structures
73	K Saranya	Soil Mechanics	Soil Mechanics And Foundation Engineering
74	G Kumaresan	Structural Engineering	Structural Engineering
75	A Radha Krishnan	Environmental Management	Environmental Management
76	R Gopalakrishnan	Structural Engineering	Concrete Technology And Material Engineering
77	Ruby Freya	Structural Engineering	Steel Structures, Computerized Simulation Modeling
78	Dr.R.Parthiban	Chemical Engineering	Environmental Technology
79	Dr.K.Balu	Chemical Engineering	Process Modeling And Simulation
80	Dr.S.Chandrasearan	Industrial Tribology	Industrial Tribology
81	Dr.N.Meyyappan	Chemical Engineering	Mass Transfer
82	Dr.S.Sivaraja	Chemical Engineering	Environmental Heat Transfer And Fluid Dynamics
83	T.Kavitha	Chemical Engineering	Chemical Engineering
84	PL.Umayal Karpagam	Human Resources And Management	Human Resources And Management
85	R.Govindarasu	Process Control	Process Control
86	A.C.Vijayalakshmi	Petroleum Refining And Petrochemicals	Petroleum Refining And Petrochemicals
87	C.Muthuraj	Chemical Engineering	Chemical Engineering

S.No	Name of the Faculty	Subject	Specialization
88	Dr.D.Balaji	Chemical Engineering	Bio Process
89	C.Sudha	Plant Design	Plant Design
90	B.S.Vishal	Chemical Engineering	Energy Engineering
91	S.Rajasekar	Chemical Engineering	Process Control
92	A.Asha	Petroleum Refining And Petrochemicals	Petroleum Refining And Petrochemicals
93	D.Sivakumar	Chemical Engineering	Environmental Management
94	Dr.G.Sivakami	Chemical Engineering	Chemical Engineering
95	G.Hima Bindu	Chemical Engineering	Corrosion Engineering
96	Dr.Palani	Chemical Engineering	Electrochemical Engineering
97	A.Arokiaraj Alphones	Chemical Engineering	Water And Waste Water Treatment, Reverse Osmosis In Membrane Filtration
98	R.Remy	Chemical Engineering	Chemical Engineering
99	Dr T K Thivakaran	Image Processing	Image Processing, Cryptography, Data Mining
100	Dr Susan Elias	Artificial Intelligence	Machine Learning
101	Dr Krishnamurthy	Data Mining	Association Rule Mining
102	Dr V Vidhya	Speech Coding, Natural Language Processing	Speech Coding, Recognition
103	Ms S R Malathi	Digital Image Processing	VLSI
104	Mr S Muthukumar	Computer Architecture	Multi-Core Architecture
105	Ms R Jayabhadhuri	Soft Computing, Parallel Computing	Soft Computing
106	Ms K S Gayathri	Artificial Intelligence, Machine Learning	Reasoning & Decision Support System
107	Mr N M Balamurugan	Wireless Networks	Interference In MANET
108	Dr..S. Ganesh Vaidyanathan	Mechatronics	Pattern Recognition & Image Processing
109	Dr.R.Ramachandran	Communication Systems	Neural Networks
110	Dr.M.Subramaniam	Applied Electronics	Expert Control Systems
111	Dr.G.A.Sathish Kumar	Applied Electronics	Information & Communication Engineering
112	Mrs.G.Padmavathy	Computer Networks	Computer Networks
113	Dr.H.Umma Habiba	Applied Electronics	EBG Embedded UWB Band Pass Filters
114	Mr.S.R.Balasubramanian	Laser & Electro Optical Engineering	Laser & Electro Optical Engineering
115	Mrs.Jothilakshmi	Communication Systems	Communication Systems
116	Mrs.T.J.Jeyaprabha	Communication Systems	Communication Systems
117	Mrs.D.Menaka	Communication Systems	Communication Systems
118	Mrs.K.Srividhya	Communication Systems	Communication Systems

S.No	Name of the Faculty	Subject	Specialization
119	Mr.S.Senthil Rajan	Communication Systems	Wireless Communication
120	Mr.S.P.Sivagnana Subramanian	Communication Systems	Communication Systems
121	Mrs.S.Kalyani	Communication Systems	Communication Systems
122	Mrs.R.Kousalya	Applied Electronics	Applied Electronics
123	Mr.M.Athappan	Applied Electronics	Applied Electronics
124	Ms.P.Sasikala	Computer Science	Computer Science
125	Ms.L.Anju	Applied Electronics	Applied Electronics
126	Ms.B.Sarala	Applied Electronics	Applied Electronics
127	Mr.P.Muthukumaran	Communication Systems	Communication Systems
128	Ms.M.Anushya	VLSI Design	VLSI Design
129	Ms.B.Hemalatha	Communication Systems	Communication Systems
130	Mr.S.Saravanan	Communication Systems	Communication Systems
131	Ms.S.Radhika	Communication Systems	Communication Systems
132	Ms.M.Vidya	Medical Electronics	Medical Electronics
133	Ms.S.Poorani	Multimedia Technology	Multimedia Technology
134	Ms.C.Gomatheeswari Preethika	Applied Electronics	Applied Electronics
135	Mrs.R.Rajeswari	Applied Electronics	Applied Electronics
136	Mr.M.Premkumar	Communication Systems	Communication Systems
137	Mr.M.H.Masood	Rf & Microwave	Rf & Microwave
138	Ms.K.L.Swantana	Electronics	Engineering
139	Mr.R.Gayathri	Laser & Electro-Optical Engineering	Laser & Electro-Optical Engineering
140	Dr KR Santha	Digital Signal Processing, VLSI	DSP Applications In Power Electronics
141	Dr M Gopalakrishnan	High Voltage Engineering	High Voltage Engineering Electrical Power Systems
142	Mr. K Sundararaman	Electrical Engineering	Converters
143	Mr. R Karthikeyan	Power Systems	Finite Element Analysis
144	Dr. Sudhakar K Bharatan	Electrical Engineering	Semiconductor Devices & Nano Technology
145	Mr. S G Bharathi Dasan	Power Systems Engg	Power Systems
146	Ms.Chaya Kulkarni	Electronics & Control	Electronic Circuits, Biomedical Instrumentation
147	Ms.V Sivagami	Power Electronics And Drives	Power Electronics Drives & Control
148	Mr. C Venkatesan	Electrical Energy Systems	Power Systems
149	Mr. S S Sethuraman	Power Electronics And Drives	Power Electronics
150	Mr. T Annamalai	Power Electronics And Drives	Power Converters, Renewable Energy Sources,

S.No	Name of the Faculty	Subject	Specialization
151	Ms.D Kavitha	Power Electronics And Drives	Interleaved Controller And Multilevel Inverter
152	Ms.S Arulmozhi	Power Electronics And Drives	Renewable Energy & Drives
153	Ms.D.Amudhavalli	Power Electronics And Drives	Converters, Renewable Energy(Solar & Wind)
154	Mr. S Kumaravel	Power System Engg	Power System Analysis
155	Ms.M Sasikala	Power Electronics And Drives	Converters
156	Ms.S Sumalatha	Power Electronics And Drives	Converters
157	Ms.N Shanmuga vadivu	Power Electronics And Drives	Power Electronics, Microprocessor
158	Ms.K Suganthi	Power Electronics And Drives	Power Electronics
159	Mr. A Tamilselvan	Power Electronics And Drives	Device Modeling Choppers
160	Mr. S Sudharsanam	Power Electronics And Drives	Converters, Renewable Energy
161	Ms.S Lavanya	Electrical And Electronics Engg	Inverters
162	Ms.V Jayashri	Electrical And Electronics Engg	Power Electronics, Control System, Machines
163	Ms.S. Anitha	Applied Electronics	Inverters, FPGA Design
164	Ms.K.S.Pavithra	Electronics	Low Power, Low Cost ASIC
165	Ms.S.Sinthamani	Power Electronics And Drives	Power Electronics & Facts
166	Ms.C Suganthi	Power Electronics And Drives	Power Electronics, Renewable Energy Sources
167	Mr. M.Ranjith Kumar	Power Electronics And Drives	Power Electronics & Robotics
168	Ms.R Srinidhi	Power Electronics And Drives	Power Electronics & Robotics
169	Ms.Nagalakshmi SV	Power Electronics And Drives	Embedded Systems
170	Mr. D S Purushothaman	Power Electronics And Drives	Spm, Embedded, Robotics, Power Electronics
171	Mr. I Venkatraman	Power Electronics And Drives	Inverter And Renewable Energy Resources
172	G.Aarthi	Power Electronics And Drives	Power Electronics, Solid State Drives.
173	Prof.E.G.Govindan	Radar Systems & Communication Engg	Information Security, Networking
174	Dr. G. Sumathi	Grid Computing	Parallel & Distributed Computing,
175	Dr.N.Kumaratharan	Wireless Communication	Wireless Communication
176	Dr.D.Balasubramanian	Computer Science	Image Processing
177	K.Thaiyalnayaki	Applied Electronics	Image And Multimedia Processing
178	Ms. S.Swarna Parvathi	Communication Systems	Multimedia Networks

S.No	Name of the Faculty	Subject	Specialization
179	V.M.Sivagami	Computer Science	Distributed Systems-Grid And Cloud
180	N.Revathi	Computer Science	Parallel Computing, Distributed Systems
181	N.Devi	Multimedia Technology	Image Processing, Multimodal Interaction
182	Ms. B.T.Shobana	Computer Science	Computer Networks, Data Mining
183	Ms. R. Dhanalakshmi	Computer Science	Image Processing
184	Ms.P.Leela Rani	Computer Science	Data Mining
185	Ms.D.Jayanthi	Computer Science	Data Mining
186	Ms.A.Kala	Information Technology	Image Processing, Data Mining
187	Ms.K.Kiruthika Devi	Computer Science	Network Security, Data Mining
188	Ms.P.Sharon Femi	Information Technology	Image Processing, Network Security
189	Ms.P.Nirmala	Information Technology	Computer Networks
190	Ms.R.Saktheeswari	Information Technology	Network Security
191	Ms.P.Rohini	Computer Science	Theory Of Computation, Computer Networks
192	Ms.V.Saroja	Computer Science	Networking, Database Management
193	Mr. T. Sukumar	Information Technology	Image Processing, Information Security
194	Ms. U. Pooranima	Computer Science	Database, Computer Networks
195	Ms.L.Anita Elizabeth	Computer Science	Parallel And Distributed Computing,
196	Mr.K.Suresh	Communication Systems	Wireless Communication, CDMA Engineering
197	Ms.B.Lalithambigai	Computer Science	Medical Image Processing
198	Ms. H. Maimoon Begum	Computer And Communication	Mobile Computing(Manet), Computer Networks
199	Ms. M.Vijayashanthi	Computer Science	Data Structures, Dbms,
200	Ms.V.Rajaram	Communication Systems	Image Processing
201	Ms. K.Nivethaa Shree	Computer Science	Cryptography And Network Security
202	Ms.T.Sravani	Computer Science	Network Security,Data Structures
203	Ms.N.Uma	Computer Science	Data Mining, Cryptography
204	Mr.K. Arun kumar	Computer And Communication	Software Engineering
205	Ms. Umamasheswari.S.K	Computer And Communication	Digital Image Processing
206	Ms.C. Silambarasi	Knowledge Engineering Computational Logistics	Data Mining

S.No	Name of the Faculty	Subject	Specialization
207	Dr. A.Venkatesan	Technological Operation	Metal Cutting
208	Mr. S.Ramesh	Machine Tool Design	Design Of Transmission Systems
209	Dr. R.Ramesh	Machine Design	Tribology
210	Dr.K.Pitchandi	Design & Production Of Thermal Power Equipments	Thermodynamic Optimization Of Thermal Equipments
211	Dr. J.Venkatesan	Thermal Power Equipments	Mathematical/ Thermodynamic Modelling
212	Dr. T.V.Balasubramaniam	Machine Design	Stress Analysis and Internal Combustion Engines
213	Mr. K.S.Badrinathan	Manufacturing Technology	CAD / CAM
214	Dr. T.Raja	Engineering Design	Metal Matrix Composites
215	Mr. S.Ramesh Babu	Manufacturing Automation	Machine Tools And Machining
216	Mr. R.Murugan	Engineering Design	Mechanical Vibration
217	Mr. S.Gopinath	Manufacturing Engineering	Supply Chain Management
218	Mr. A.Balasubramanian	Design & Production Of Thermal Power Equipments	Thermodynamic Optimization Of Thermal Equipments
219	Mr. S.Ilayavel	Production Engineering	Tool Life Enhancement
220	Mr. M.Mohandass	Computer Integrated Manufacturing	Automation Using Fluid Power
221	Mr. C.Senthamarai Kannan	Computer Aided Design	Vibration Control And Condition Monitoring
222	Mr. M.Prem Ananth	Computer Aided Design	Tribology
223	Mr. S.Ponnuvel	Computer Integrated Manufacturing	Machining of FRP Composite Materials
224	Mr. A.Arockia Selvakumar	Computer Aided Design	Finite Element Analysis
225	Mr. S.Natarajan	Thermal Power Engg	Alternate Fuels
226	Mr. P.Raghu	Internal Combustion Engineering	CFD
227	Mr. V.Sridharan	Advanced Mechanical	CFD
228	Mr. S.Arumugam	Internal Combustion Engineering	Internal Combustion Engines
229	Mr. M.Maheswaran	Computer Aided Design	Finite Element Analysis
230	Mr. G.Saravanaram	Computer Aided Design	Finite Element Analysis
231	Mr. G.Kirubakaran	Computer Aided Design	Computer Aided Design
232	Mr. G.Manikandaraja	CAD/CAM	Composite Material
233	Mr. M.Kalaimani	Product Design And Development	Finite Element Analysis
234	Mr. R.Kaliyanasunder	Thermal Engineering	Alternative Fuels IC Engines



S.No	Name of the Faculty	Subject	Specialization
235	Mr.M.Anandan	Mechanical Engg	Alternate Fuels, I.C. Engines
236	Mr.L.Poovazhagan	Mechanical Engg	Nano Composites
237	Mr.M.Gajendiran	Mechanical Engg	Energy Engineering
238	Mr.S.Seenivasan	Mechanical Engg	Composites
239	Mr.V.Gurusamy	Mechanical Engg	Welding

**3.1.8 Enumerate the efforts of the institution in attracting researchers of eminence to visit the campus and interact with teachers and students?**

This college encourages both faculty and student to invite the expert speakers in the field of both academia and industries for conducting various technical programs and also to get good exposure in all latest technologies. Department Professional Associations are always active in organizing the guest lectures and technical symposium throughout the year without affecting the academic schedules. The key programs / technical talks organized by various departments during the last five years are listed in **Appendix 3.1 C**.

**3.1.9 What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?**

College spends large amount of funds towards giving the opportunity for our faculty members to pursue PhD by offering the required sabbatical leave with full sponsorship and the department wise list is given below highlighting the year of course registration and status of completion. 14% of the faculty have availed sabbatical leave. The provision has contributed to improve the research culture in the campus largely. More number of faculty have obtained their PhD and amount of grant received from various agencies for research has been increasing year after year.

S.No	Name	Dept.	Sponsored / Own Accord	Deputation for PhD
				Status
1	K.Bhaskar	AE	Sponsored	Pursuing
2	C.Kannan	AE	Sponsored	Pursuing
3	Dr. T. Kulandaivel	AM	Sponsored	Completed
4	S.Raju	CA	Own Accord	Pursuing
5	M. Krishnamurthy	CA	Own Accord	Completed
6	P. Janarthanan	CA	Own Accord	Pursuing
7	K.R.Ramkumar	CA	Own Accord	Pursuing
8	G. Thanigaivel	CA	Own Accord	Pursuing
9	N. Rajeswari	CA	SVCE Sponsored	Pursuing
10	C.G.Hemamalini	CE	sponsored	Submitted thesis
11	Ms.A.C.Vijayalakshmi	CH	Sponsored	In Progress

S.No	Name	Dept.	Sponsored / Own Accord	Deputation for PhD
				Status
12	Ms.T.Kavitha	CH	Sponsored	In Progress
13	Mr.R.Govindarasu	CH	Own Accord	In Progress
14	Mr.C.Muthuraj	CH	Own Accord	In Progress
15	Ms S R Malathi	CS	Sponsored	Pursuing
16	Ms S Pushpa	CS	Sponsored	Completed
17	Dr.Susan Elias	CS	Sponsored	Completed
18	S.Ganesh Vaidyanathan	EC	Sponsored	Completed
19	G.A.Sathishkumar	EC	Sponsored	Completed
20	G.Padmavathy	EC	Sponsored	Pursuing
21	Mr. K Sundara Raman	EE	Sponsored	Confirmation
22	Mr. R Karthikeyan	EE	Sponsored	Thesis Submitted
23	Mr.S.G.Bharathidasan	EE	Sponsored	Confirmation
24	Mr.S.Kumaravel	EE	Sponsored	Course Work Completed
25	Mr.S.Sethuraman	EE	Sponsored	Pursuing Course Work
26	Mr.T.Annamalai	EE	Sponsored	Pursuing Course Work
27	Mr.A.Tamizhselvan	EE	Own Accord	Course Work Completed
28	C. Amutha Charu Sheela	HS	Own Accord	Pursuing
29	Samuel Dawson	HS	Own Accord	Pursuing
30	S.Swarna Parvathi	IT	Sponsored	Confirmation Declared
31	N.Devi	IT	Sponsored	Confirmation Declared
32	K.Thaiyalnayaki	IT	Own Accord	Completed Coursework
33	V.M.Sivagami	IT	Own Accord	Completed Coursework
34	N.Revathi	IT	Sponsored	Pursuing Coursework
35	T. Sukumar	IT	Sponsored	Completed Coursework
36	K.S. Badrinathan	ME	Sponsored	Completed Course work
37	J.Venkatesan	ME	Sponsored	Completed
38	S. Rameshbabu	ME	Sponsored	Completed Course work

**3.1.10 Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land)**

College library has full access to 236 Indian journals and 536 international journals with online access to IEEE, Science Direct, Springer, ASCE journals ASTM Digital Library, J-Gate, Nature, Scientific American, International Journal of Engine Research etc., In addition to this our digital library has access to E-Books, E-Lectures and large number of CD-ROM collection for the benefit of students and faculty members. SVCE also conducts the Research Day where in faculty members doing active research would be presenting their work/sharing their knowledge to other faculty members and students for the mutual benefit. In all our labs, we do certainly conduct some additional experiments beyond the prescribed syllabus for ensuring better clarity. The students are made aware by novel teaching methods and importance of patents.

**3.2 RESOURCE MOBILIZATION FOR RESEARCH**

**3.2.1 What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.**

As mentioned below, good percentage of total department budget is earmarked for research. The tables given below furnish the major heads of expenditure and actual utilization with specific allocation to equipments, maintenance and books.

Academic Year	Major Heads in Capital R & D Budget (Rupees in Lakhs)							
	Equipments & Machinery		Furniture		Books		Replacement of Obsolete Items	
	Allocated	Spent	Allocated	Spent	Allocated	Spent	Allocated	Spent
2012-13	86.56	69.62	7.75	4.90	19.29	16.52	62.67	47.71
2011-12	86.23	68.47	13.58	9.67	41.69	30.16	41.14	16.41
2010-11	121.91	68.25	9.15	3.48	33.96	22.41	53.50	34.70
2009-10	122.19	108.27	8.08	33.14	27.55	20.05	42.11	31.57
2008-09	258.35	174.89	7.98	4.18	26.21	26.19	57.60	50.75

Academic Year	Department Budget in Lakhs (Rupees in Lakhs)		
	Equipments	Maintenance	Books
2012-13	216.52	54.78	28.89

2011-12	186.23	39.06	45.84
2010-11	244.04	40.31	43.13
2009-10	218.22	26.06	36.90
2008-09	303.84	28.27	33.99

Academic Year	Total Dept Budget (Rupees in Lakhs)	Budget Provision for R&D (Rupees in Lakhs)	Utilization of Actual R&D Budget (Rupees in Lakhs)
2012-13	382.94	49.54	32.35
2011-12	343.14	58.56	70.92
2010-11	353.91	87.61	73.52
2009-10	365.14	83.16	53.98
2008-09	433.84	266.46	195.69

Apart from the expenditures listed, college also receives the grant from various funding agencies viz., AICTE, UGC, DRDO, DST etc., for conducting Workshops, Conferences and research projects. Over and above the grant expenditure is borne by college management from its own resources. The budget allocated for Research

**3.2.2 Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?**

Yes. The college provides a R & D budget of 2 – 4 lakhs depending upon in the student and faculty strength of the department which is used as a seed money and other expenditure for the same. Apart from that, around 36 students and faculty members have been sponsored by our college management for attending International Conferences during the last four years. The details of sponsorship to staff and students are given in **Appendix 3.2 A**. The college provides money to buy equipments to setup research labs. Besides the above listed sponsorship, the college management regularly sponsors both faculty and student to participate in various National Level Conferences, Workshops, Seminars, Technical Events, FDPs etc., for upgrading their knowledge on par with industrial standards so as to fulfill the ISO-research objective adopted by the institution.

**3.2.3 What are the financial provisions made available to support student research projects by students?**

Research facilities worth Rs.9858400 have been created during the last five years and made available to both the staff and students to support their research activities. The details are as follows:

Sl.No	Item Particulars	Dept	Year of Purchase	Cost of Investment in Rupees
1	Needle lift sensor for Heavy Duty	AE	2012-13	500000

Sl.No	Item Particulars	Dept	Year of Purchase	Cost of Investment in Rupees
	Diesel Engine			
2	Single Cylinder Diesel Engine set up with complete research facility such as Performance, emission and combustion parameters	AE	2011-12	500000
3	AVL Smoke Meter & AVL Five Gas Analyzer	AE	2010-11	350000
4	Up gradation of Bioprocess and Downstream Processing Lab for Mammalian Cell Culture	BT	2012-13	1800000
5	Computational Systems Biotechnology Lab	BT	2012-13	600000
6	Computer Systems	CS	2012-13	96100
7	Network Analyzers-3GHz-LA make	EC	2011-12	622100
8	Network Analyzers 3GHz Agilent make	EC	2011-12	1500000
9	ADS Simulation Software	EC	2010-11	208000
10	Xilinx System Software Edition 13.3 25 user license	EC	2010-11	88200
11	OrCAD Software 5 user license	EC	2010-11	294000
12	Lab view Software 15 user license	EC	2010-11	286000
13	4 -Dell Optiplux 980DT	IT	2011-12	120000
14	AVL Indimicro 602 – TI0602A with Diesel Package	ME	2012	1344000
15	Impulse Hammer, Force transducer facility with Data Acquisition System	ME	2010	680000
16	Pulsed MIG Welding Machine	MR	2012-13	670000
17	Star CD-CFD Software	MR	2010-11	200000

**3.2.4 How does the various departments/units/staff of the institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavors and challenges faced in organizing interdisciplinary research.**

Subject Interest Group (SIG) involving faculty members from different department meets every month to discuss the leading edge research topics in full length with other members for mutual benefits. As a result, many new research ideas had been generated leading to a good number of quality research papers.

**3.2.5 How does the institution ensure optimal use of various equipment**

**and research facilities of the institution by its staff and students?**

All equipments existing in the labs are calibrated and made available both to faculty members and students. Workshop is conducted by focusing the application of different types of equipments to be engaged by the faculty members. Training and demonstration also carried out using these instruments during workshop for the participants. Similarly for routine practical experiments all available equipments are well accessible to students for their practical purpose.

In our college, the lab and other research facilities is left open for both students and faculty members beyond official working time and also during vacation period. Our campus is connected with full fledged LAN facility with numerous workstations in every department and also installed with required latest system and application software packages. Our central library has access to 82382 volumes and not less than 25000 titles, 236 Indian journals, 536 international journals with central computational facility fitted with 8Mbps internet connectivity which is left open to students including Sunday.

**3.2.6 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If ‘yes’ give details.**

Yes. Our college has received grants from many organizations for creating research facility mainly to upgrade our facilities and also to purchase latest capital intensive equipments and the details about such major prestigious assignments are as follows:

S. No	Project Title	Primary Investigator/ Designation with Dept.	Funding Agency	Amount in lakhs	Year
1	Combustion Characteristics of CRDI Multi Cylinder CI Engine Fuelled With Biodiesel Blend	Dr.N.Muthukrishnan HOD - AE	AICTE - MODRO BS	10	2012
2	ANN Modeling of pulsed Metal inert gas (p-MIG) welding of Mg Alloy plates		AICTE - RPS	14	2012
3	Numerical simulation of Magneto hydrodynamic effects on oscillating vertical plate with heat and mass transfer	Dr.R. Muthu kumaraswamy HOD - AM	DRDO, New Delhi	2.14	2010
4	On Certain classes of Analytic Univalent function and sakagechi type function	Dr.B.Sruthakeerthi AP - AM	DST	2.0	2012
5	Upgradation of Bioprocess and Downstream Processing Lab for Mammalian Cell Culture	Dr. M. Sivanandham, Professor, Dept of BT	AICTE/M ODROB	18	2013

S. No	Project Title	Primary Investigator/ Designation with Dept.	Funding Agency	Amount in lakhs	Year
6	Computational Systems Biotechnology Lab	Dr. M. Sivanandham, Professor, Dept of BT	M/s Cognizant Technology Solutions	6	2012
7	Secured Parallel Hybrid Routing for Manets	K.R. Ramkumar Associate Professor CA	DRDO	12.23	2011
8	Modernization of Chemical Reaction Engg (CRE) laboratory	Dr.P.V.R.Iyer Professor & Head, CH	AICTE – MODRO BS	7.5	2009
9	Modernization of Heat transfer laboratory	Dr.R.Parthiban, Professor & Head, CH	AICTE – MODRO BS	14.39	2012
10	Dynamic modeling and control of direct alcohol fuel cell	Dr.R.Parthiban, Professor & Head, CH	AICTE - RPS	4.777	2013
11	Contemporary Research and Practices in Pollutant Elimination Systems towards Cleaner Environment	Dr.R.Parthiban, Professor & Head, CH	AICTE	1.75	2013
12	Artificial Intelligent based Tsunami Alert System Duration: Two Years	Dr.S.Ganesh Vaidyanathan HOD- EC	AICTE	4.025	2011
13	Modernization of Power Electronics and Drives Lab	Dr.KR.Santha/ HOD- EE	MODRO B, AICTE	9	2010
14	A Framework for Resource Monitoring and Fault Tolerant Scheduling in Heterogeneous Computational Grids	Dr. G. Sumathi/ Professor-IT	DRDO	0.45500	2010
15	Dual Blind Detection Robust Watermarking for Multimedia Security	Ms.K.Thaiyalnayaki/ Associate Professor-IT	ISRO	3.3	2011
16	Robust Video Streaming using H.264 Scalable Video Coding over Mobile Broadband Networks	S.Swarna Parvathi/ Associate Professor-IT	ISRO	0.9	2012
17	Performance, Combustion and Emission analysis of Single and Multi cylinder CI engines fuelled with diesel and bio-diesels	Dr. N.Nallusamy. Professor & Head HOD - ME	AICTE	12	2011

**3.2.7 Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organisations. Provide details of ongoing and completed projects and grants received during the last four years.**

Many of our faculty members currently executing the research projects to AICTE, UGC, DRDO, DST etc., and college has given the undertaking to those funding agencies that in case expenditure incurred by the Principal Investigator is more than the sanctioned amount, then institute will bear the expenditure from its own resources as seed money. The teaching load is brought down for the principal investigator mainly to make them to feel comfortable while carrying out such prestigious assignments. The management also shares percentage of the total income generated with principal investigators for motivating the academic research. List of major and minor funded projects done by each department is separately furnished in the following tables.

Dept	Nature of the Project	Duration Year		Name of the funding agency	Total grant		Total grant received till date
		From	To		Sanc	Recd	
AE	Minor projects	Jan-2008	April-2008	TNSCT	5000	5000	5000
	Industry sponsored	2011	2012	Gates Unitta Ltd,	480000	480000	1280000
	Major projects	2012	2013	AICTE	1000000	800000	
	Interdisciplinary projects	2010	2010	Western Thomson(I) Ltd	100000	100000	100000
AM	Minor projects	2008	2010	DRDO	267000	267000	267000
		2010	2012	DRDO	214000	214000	214000
		2012	2015	DST	200000	100000	100000
CA	Major projects	2011	2014	DRDO	1223000	600000	600000
CH	MOROBS	2009	2010	AICTE	750000	750000	750000
	MODROBS	2012	2013	AICTE	1439000	1439000	1439000
	RPS	2013	2016	AICTE	477700	994000	994000
	Seminar Grant	2013	2013	AICTE	175000	-	-
EC	Major Projects	2009	2011	AICTE	402500	402500	4,02,500
CS	Major Projects	April-2011	March-2013	DRDO	455000	368000	368000
		Jan-2012	Dec-2013	ISRO	330000	330000	330000
		Feb-2013	Jan-2015	ISRO	900000	528000	528000
IT	Major Projects	June 2009	May 2012	DRDO	670000	670000	670000
		Feb 2009	Feb 2011	DRDO	700000	700000	700000
		July 2012	July 2014	DRDO	2464000	2464000	2023000
ME	Major projects	2009	2011	AICTE	350000	350000	350000
		2011	2012	AICTE	1200000	1200000	
		2013	2016	AICTE	4194000		4194000
	Industry sponsored	2013	2013	Lucas-TVS	50000		50000



### **3.3 RESEARCH FACILITIES**

#### **3.3.1 What are the research facilities available to the students and research scholars within the campus?**

Our college offers both undergraduate and post graduate courses in varied discipline and to meet the curriculum including the research requirement the management has developed state of art facilities for the benefit of both students and faculty members. High speed internet connectivity up to 8 mbps and good number of desktop / laptop PCs has also been provided to all departments to enable the faculty and students to pursue their academic as well as their research activities.

The lists of major equipments available in the various departments are given in **Appendix 3.3 A.**

#### **3.3.2 What are the institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research?**

- ✓ In line with the curriculum requirement issued by the affiliating University i.e Anna University, Chennai, the basic infrastructure is available for both under graduate & post graduate courses and the list of such equipment has already been mentioned in section 3.3.1
- ✓ To meet the increased strength of students and also to meet the demand of new leading edge technology, Management continuously indentify and procures new equipments for research work and also submit proposals for getting MODROBS from AICTE and already got projects worth Rupees 130000 in the year 2013.
- ✓ Encouragement given to faculty for Applying to funding agencies like AICTE through their various schemes like MODROB, Research Promotion Scheme (RPS) mainly to establish research facilities through sanctioned funded project.
- ✓ In department budget allocation, normally funds separately have been allocated for research through which latest software and equipments can be procured to carry out the research.
- ✓ Dedicated computer system for prospective faculty involved in active research to carry out research pursuit.
- ✓ Faculty and students always encouraged to interact with industries for exploring the avenues of collaborative research.
- ✓ Establishment of facilities for functional testing to promote consultancy through meeting the testing needs of the neighboring/interacting industries.
- ✓ Constant initiatives taken to develop collaborations with Industry, Research Institutes and Abroad Universities etc.,
- ✓ Deployed full computerization through expansion of Information Management System and developed e-learning facilities
- ✓ Institute then and there review the research progress of the researchers

and new funding will be provided to individual department every year to proceed with the current research and start new research work.

- ✓ Sophisticated instruments, modeling tools, data processing software, and modern equipments will be purchased every year for upgrading and creating the research infrastructural facilities to meet the needs of new and emerging areas of research.
- ✓ Each department has industry institute interaction cell for creating and enhancing new facilities to conduct joint research activity.

**3.3.3 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities?? If 'yes', what are the instruments/ facilities created during the last four years.**

The following table gives the details about the grants received from the industry / other funding agencies and several items specified under section 3.3.1 were procured from such special grants

Dept	Research Facility Created	Sponsor	Amount received in Lakhs
AM	Numerical simulation of Heat and Mass Transfer effects on moving vertical plate in the presence of Magnetic field	DRDO	2.67
AM	Numerical simulation of Magnetohydrodynamic effects on oscillating vertical plate with heat and mass transfer	DRDO	2.14
AM	On Certain classes of Analytic Univalent function and sakagechi type function	DST	2
AE	Evaluation of Life Time of The Belt By Engine Testing	M/s Gates Unitta Ltd,	4.8
AE	Combustion Characteristics Of CRDI Multi Cylinder CI Engine Fuelled With Biodiesel Blend	AICTE	10
BT	Computational System Bio-technology Lab	CTS	6.27
CA	Secured Hybrid parallel routing for manets	DRDO	12.23
CS	Intrusion Detection in Wireless AdHoc Networks using Adaptive Heuristic Algorithm	DRDO	6.7
CS	The Design & Development of a multimedia presentation system that streams MPEG-21 compatible media-on-demand	DRDO	7
EC	Artificial Intelligence based Tsunami Alert System	AICTE	4.03
IT	A Framework for Resource Monitoring and Fault Tolerant Scheduling in Heterogeneous Computational Grids	DRDO	4.55
IT	Dual Blind Detection Robust Watermarking for Multimedia Security	ISRO	3.3
IT	Robust Video Streaming using H.264 Scalable Video Coding over Mobile Broadband Networks	ISRO	9

Dept	Research Facility Created	Sponsor	Amount received in Lakhs
ME	Experimental Investigation and ANN Modeling of Al-SiC(10p) Metal Matrix Composites Machining using PCD Insert	AICTE RPS	3.5
ME	Performance, Combustion and Emission analysis of Single and Multi cylinder CI engines fuelled with diesel and bio-diesels	AICTE MODROBS	12
ME	Investigation on Vibration Characteristics of Nano Silica/Micro Rubber reinforced Carbon fiber reinforced composite Structural beams	AICTE RPS	41.94
ME	Experimental investigation on effect of fuel spray characteristics of direct injection diesel engine fuelled with biodiesel		
ME	Machining & Modeling of Polymer composites		
ME	MIG Welding of Mg Alloys		

### 3.3.4 What are the research facilities made available to the students and research scholars outside the campus / other research laboratories?

- ✓ Costly equipments available at Industry and Research Institutes are made available to our staff members by entering suitable MOU arrangement for mutual benefit.
- ✓ Institutional membership cards from the leading libraries like IIT, Anna University, British Council Library etc., allow our staff and the students to use these resources.
- ✓ UG and PG students are always encouraged to do their project work at Research organizations and Industries like DRDO, ISRO, SAMEER etc.,
- ✓ Anna University recognized Ph.D supervisors are permitted to carry out collaborative research work in Anna University, Chennai.
- ✓ Faculty members registered for Ph.D programme are allowed to avail the Anna University's research facilities.

### 3.3.5 Provide details on the library/ information resource centre or any other facilities available specifically for the researchers?

Our central library is fully computerized by automating the issue of books with bar code reader. The library has 25262 titles covering all major fields of Science and Engineering. The library covers an area of 1338 sqm, spanning the ground floor, first floor and second floor, with conference room and an ample study space. The ground floor is Air-conditioned. The Library has the following facilities for the faculty, staff and the students: Conferencing, Multimedia, Internet, Reprography and a CD-ROM collection. A book bank for deserving candidates is also being maintained.

The college subscribes to most of the major technical journals including IEEE, IEE, ASCE, ACM, ASTM, J-GATE, MCGRAW HILL, NATURE and

Science Direct journals. To encourage online learning, Multimedia Computers with internet connectivity provided for accessing CBT, CDs, e-books, e-journals etc. In addition to this central library, departments have its own library for the benefit of their faculty and PG students.

A library committee headed by the Principal, comprising of all the Heads of Departments, and Student Representatives, meets every semester to discuss the functioning of the library. The total number of volumes, Print and Online journals, CD's are indicated in the following table.

Sl.No	Library Resources	Availability in Numbers
1	Volumes	82328
2	Titles	25262
3	International Journals	735
4	Indian Journals	245
5	Magazines	79
6	Back Volumes	7223
7	Daily Newspaper	11
8	Digital Medias ex., CD-Rom	1725(Books CD)
9	Electronic Books	366

Subjects	National Journals Subscription	International Journals Subscription	Other Research Magazines
B.E. - AE	7	20	11
B.Tech.- BT	10	53	2
M.Tech. - CH	12	18	4
B.E. - CS	20	72	8
B.E. - EE	15	33	11
B.E. - EC	18	46	5
B.Tech. - IT	14	61	12
B.E. - MR	8	16	-
B.E. - ME	14	53	4
B.E. - CE	7	53	-
M.E. - CS	10	16	-
M.E. Applied Electronics	6	19	-
M.E. Communication System	5	37	5
M.E. Power Electronics Drives	5	17	1
M.E. CAD	5	16	2
M.E. Computer and Communication	7	21	1
M.Tech. BT	8	48	2
M.Tech CH	5	14	-
MCA	12	63	8
M.E. Internal Combustion Engg	10	11	-
M.E. Mechatronics	5	20	-
M.Tech. Petroleum Refining and Petrochemicals	5	11	-

Applied Mathematics	15	6	-
Applied Physics	13	7	-
Applied Chemistry	5	-	1
Humanities and Social Sciences	4	4	1

**3.3.6 What are the collaborative research facilities developed / created by the research institutes in the college. For ex. Laboratories, library, instruments, computers, new technology etc.**

Out of the funds received from industry or other beneficiary agency for developing research facilities, the following instruments / facilities created during the last five years for mutual benefit

Sl.No	Item Particulars	Dept	Year of Purchase	Cost of Investment in Rupees
11.	Computational Systems Biotechnology Lab	BT	2013	6 lakhs
12.	<b>Apple iMac – 1 No</b> Processor : 2.66Ghz, HDD : 320 GB Ram : 2GB , 8x SuperDrive, 20" TFT Display, <b>Apple Mac Book – 1 No</b> Processor : 2.4GHz Core 2 Duo, Ram : 2 GB, HDD : 160 GB, 13.3" Display <b>Samsung Laserjet Printer, SCX-4300</b>	CS	2008-09	1.5 lakhs
13.	<b>HP Proliant DL380G5 (Storage Server)</b> Xeo E5410@2.33GHz 12 GB RAM, 200GB,300GB HDD HP NC373i Adapter, HP monitor 15" Intel Core 2 Duo Proc. E7200 -2.4 Ghz, 2 GB DDR2 - 1 No, Qualnet Software		2008-09	2.6 lakhs
14.	HP Core i5, 3.10 Ghz, 8GB DDR4, 500GB HDD – 1 No		2012-13	38,500.00
15.	HP Core i3, 3.3 Ghz, 4GB DDR4, 500GB HDD – 2 No		2012-13	57,600.00
16.	22 Systems running in dual mode (Win XP & FC 8)		2010-11	4.5 lakhs
17.	DC-DC Converters		2009-10	212762
18.	Microcontroller and FPGA based speed control of VSI fed 3 phase Induction Motor		2009-10	155501
19.	DSP based speed control of SRM	2009-10	177139	
20.	DSP and microcontroller based self-controlled operation synchronous motors	2009-10	239467	
21.	Realisation of control logic for drives using FPGA	2009-10	134177	
22.	Desktop PC HP Envy 23 Touch Smart D-020IN	IT	2012-2013	71,990/-
23.	HP Laserjet M1136 MFP		2012-2013	10,500
24.	Samsung Tablet PC P3100		2012-2013	21,500/-
25.	Core i5 DELL system with printer		2011-2012	55,100

Sl.No	Item Particulars	Dept	Year of Purchase	Cost of Investment in Rupees
26.	MATLAB R2012a		2011-2012	1,14,712
27.	Air Conditioner		2010-2011	28,890
28.	UPS 800VA		2010-2011	8,400
29.	Desktop PC Dell Optiplex 390DT		2010-2011	86,625
30.	Printer HP Laserjet M1136 MFP		2010-2011	10,500
31.	Computer Tables		2010-2011	7213.50
32.	Revolving Chairs		2010-2011	8587.50
33.	Laptop Lenovo G470		2010-2011	49,875
34.	AVL Indimicro 602 – TI0602A with Diesel Package -AICTE MODROBS		ME	2012
35.	BioGas Plant to produce 35Nm <sup>3</sup> of Gas which could handle 300Kg of food waste/day through SVCE fund	2011		12 Lakhs
36.	FRP Cell, Hydraulic Press Compression Moulding Machine (25 T)	2008		-
37.	Reciprocating Tribometer	2012		4 Lakhs
38.	HCL Computers(3)	AM	2008	79,500
39.	ACER Computers(5)		2008	1,10,000
40.	UPS (5)		2008	9,500
41.	UPS System Battery Backup		2008	26,520
42.	1.5 ton Split A/C		2008	23,718
43.	Canon Printer(1)		2009	6,500
44.	HCL Computers(2)		2009	43,000
45.	LCD Projector(1)		2011	42,938
46.	Gaussian software	AP	2008	44,000
47.	Ultrasonic interfero meter		2009	32,500
48.	Magnetic sterroe with weighing machine		2012	21,000

### 3.4 RESEARCH PUBLICATIONS AND AWARDS

#### 3.4.1 Highlight the major research achievements of the staff and students in terms of

##### \* Patents obtained and filed (process and product)

Patent filed by Mr.M.Premananth, Assistant Professor-Mechanical Engineering department, for “MULTI NUT REMOVER FOR AUTOMOBILES”. It is one of the break through research our faculty member involved and expected to achieve good success in getting the required patent

##### \* Original research contributing to product improvement

In the Computer Science & Engineering department, Lots of design and conceptual work has been done to develop E-learning tool which helped the product development cycle in a way it is expected

In association with M/s.Lucas-TVS, Chennai Three wheel Car was designed & Fabricated by DR.R.Ramesh, Professor, Department of Mechanical Engineering, during the academic year 2010-2011. It is one of the great milestones in bringing the new technique/approach in product design

- \* **Research studies or surveys benefiting the community or improving the services**

Our E-learning studies at computer Science & Engineering department helped our institution for achieving improved e-learning facility

- **Research inputs contributing to new initiatives and social development**  
Design of Smart Spaces by Computer Science & Engineering department has helped the faculty members to come out with new initiatives for possible social development .

**3.4.2 Does the Institute publish or partner in publication of research journal(s)? If ‘yes’, indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?**

Yes,

Our institution publishes the well renowned International Journal of Contemporary Science Engineering and Technology with the help of Serials Publications, ISSN: 0976-6839 with Bi-Annual Frequency

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The journal has the following publication policy

TOPICS of interest include any current subjects on Science, Engineering and Technology

The following types of articles will be considered for publication.

- (1) Research Articles: Research articles should be original, basic, applied engineering and technological studies. The articles should be well documented, novel, and significant. Text limit is 6000 words for a research article, excluding references, figures and legends.
- (2) Reviews: Articles that review a timely subject important to basic science, engineering and technological areas. Reviews must be written as concisely as possible. Reviews are usually invited Reviews, however, the unsolicited Reviews will be considered if an outline of the proposed Review Article is given for an approval. Text limit is 2000 words for review article, excluding references, figures and legends.
- (3) Public Issues: Brief articles on topics of interest to the general public in laymen terms will be considered for publication. The text limit is 400 words with no references or figures.
- (4) Letters to the Editor: The Editor invites the submission of correspondence that presents opinions in response to articles published in the journal. Letters to the Editor will be peer reviewed and published, if found to meet the requisite publication criteria. The text limit is 400 words, not including references.
- (5) Meeting Reports: Brief reports of symposia and conferences in Science, Engineering and Technology are also invited for publication in this journal. The text limit for this report is 2500 words.
- (6) Review on Book: Brief reports on recent books in the field of Science, Engineering and Technology are invited for publication in this journal. The text limit for this report is 400 words.

Papers must not have been previously published or currently submitted for publication elsewhere. The authors should confirm in writing that neither the submitted paper nor any similar paper, has been or will be submitted to or published in any other scientific journal. Papers will be evaluated for originality, significance, clarity, impact, soundness, and good English write-



up. Each paper will be refereed by two experts in the field. The referees' evaluations will then be reviewed by the editor who will recommend a decision on the acceptance or rejection of the manuscript for publication.

Submission of a manuscript to International Journal of Contemporary Science, Engineering and Technology implies that the author(s) of the paper understand and fully accept the policy of the Journal as detailed above.

When a manuscript is submitted for consideration, permission to reproduce all or parts of articles published in this journal must be sought from the Chief Editor, Editorial Office of International Journal of Contemporary Science, Engineering and Technology, Sri Venkateswara College of Engineering, Sriperumbudur, India

### 3.4.3 Give details of publications by the faculty and students:

The following table gives the publication details of our students and faculty members including the above required details.

S. No	Dept	Number of papers published by faculty	Number of publications	Chapter in Books	Books Edited
1.	AE	Faculty 54	54		
2.	AM	Faculty 05	05	-	-
3.	AP	Faculty 55	35	-	-
4.	CE	Faculty 03	1	-	-
5.	CH	Faculty 16	-	3	5
6.	CS	Faculty 49 Students 37	32	-	-
7.	EC	Faculty 19	13	-	-
8.	EE	Faculty 33 Students 06	-	-	-
9.	IT	Faculty 64	53	-	-

The following table gives the author wise number of publications, average citation index, SNIP, SJR, Impact Factor and H-Index for their publications.

S. No	Name of the Faculty	Dept	No of Publications	Av.Citation Index	SNIP	SJR	IF	H Index
1.	Dr.G.Devasagayam	AC	1	--	--	--	0.46	--
2.	Dr.S.Selvakumar	AC	2	--	--	--	0.213	--
3.	Dr.S.Jegannathan	AC	3	--	--	--	0.041	--
4.	Dr.S.Stanly	AC	2	--	--	--	0.213	--
5.	Dr.G.Baskar	AC	1	--	--	--	0.500	--
6.	Dr.B.Senthil Sivakumar	AC	1	--	--	--	0.213	1
7.	Dr.M.Thirumalaikumar	AC	4	--	--	--	0.338	4
8.	Mr.N.Nachiappan	AC	2	--	--	--	1.3	--
9.	Dr. N.Muthukrishnan	AE	20	--	--	--	--	--
10.	Dr. Saravanan S	AE	23	8.3	--	--	1.3	7

S. No	Name of the Faculty	Dept	No of Publications	Av.Citation Index	SNIP	SJR	IF	H Index
11.	Dr.Srikantha Dath, T.N	AE	2	--	--	--	--	--
12.	Mr. C.Kannan	AE	4	--	--	--	1.2	--
13.	Mr. K. Bhaskar	AE	3	--	--	--	--	--
14.	Mr. V. Ganesh	AE	2	--	--	--	0.5	--
15.	Dr.S.Sampathkrishnan	AP	10	--	--	0.17	0.4756	--
16.	Dr.A.Bhaskaran	AP	8	--	--	--	0.03	--
17.	Dr.S.Muthu	AP	25	66	--	0.17	2.09	4
18.	Dr.K.Raju	AP	5	--	--	0.102	0.16	--
19.	Ms.N.R.Sheela	AP	5	--	--	0.03	0.81	--
20.	Ms.G.Bharathy	AP	1	--	--	--	--	--
21.	Ms.S.Kalpana	AP	1	--	--	--	--	--
22.	Dr.M. Sivanandham	BT	48	18.33	17.42	12.14	120.68	15
23.	Dr. Sulochana Somasundaram	BT	13	16.23	10.18	2.02	20.46	7
24.	Dr. S. Prabhu	BT	11	16.33	4.76	0.57	16.47	6
25.	Dr. E. Nakkeeran	BT	9	3.78	12.09	1.03	23.90	3
26.	Dr. Nalinkanth V. Ghone	BT	8	21.00	8.23	2.06	21.82	5
27.	Mr.S.Raju	CA	2	--	0.559	0.559	0.559	--
28.	Mr.K.R. Ramkumar	CA	1	--	0.235	0.235	0.235	--
29.	N. Rajeswari	CA	1	--	0.413	0.413	0.413	--
30.	N. Jayalakshmi	CA	1	--	0.23	0.23	0.23	--
31.	P Sangeetha	CE	2	0	--	--	0	0
32.	C G Hemamailini	CE	1	0	--	--	0	0
33.	Dr. R.Parthiban	CH	11	-	-	-	-	-
34.	Ms. Umayal Karpagam	CH	1	-	-	-	-	-
35.	Mr. R. Govindarasu	CH	1	-	-	-	-	-
36.	Dr.Susan Elias	CS	10	--	--	--	--	2
37.	Dr.R.Ramachandran	CS	6	--	--	--	--	1
38.	Dr.T.K.Thivakaran	CS	4	--	--	--	--	1
39.	Dr.M.Krishnamurthy	CS	7	--	--	--	--	0
40.	Dr.V.Vidhya	CS	7	--	--	--	--	0
41.	Ms.R.Jayabhaduri	CS	1	--	--	--	--	0
42.	Mr.M.Ravichandran	CS	3	--	--	--	--	1
43.	Ms.V.Rajalakshmi	CS	1	--	--	--	--	1
44.	Ms.R.Vanaja	CS	2	--	--	--	--	1
45.	Ms.S.R.Malathi	CS	2	--	--	--	--	0
46.	Mr.S.Muthukumar	CS	1	--	--	--	--	0
47.	Dr.Doreen Hephzibah Miriam	CS	1	--	--	--	--	2
48.	Mr.Ezhumalai P	CS	2	--	--	--	--	1
49.	Mr.P.C.Kishore Raja	CS	2	--	--	--	--	1
50.	Dr.Susan Elias	CS	10	--	--	--	--	2
51.	Dr.R.Ramachandran	CS	6	--	--	--	--	1
52.	Dr.T.K.Thivakaran	CS	4	--	--	--	--	1
53.	Dr.M.Krishnamurthy	CS	7	--	--	--	--	0
54.	Dr.V.Vidhya	CS	7	--	--	--	--	0

S. No	Name of the Faculty	Dept	No of Publications	Av.Citation Index	SNIP	SJR	IF	H Index
55.	Ms.R.Jayabhaduri	CS	1	--	--	--	--	0
56.	Mr.M.Ravichandran	CS	3	--	--	--	--	1
57.	Ms.V.Rajalakshmi	CS	1	--	--	--	--	1
58.	Ms.R.Vanaja	CS	2	--	--	--	--	1
59.	Ms.S.R.Malathi	CS	2	--	--	--	--	0
60.	Mr.S.Muthukumar	CS	1	--	--	--	--	0
61.	Dr.Doreen Hephzibah Miriam	CS	1	--	--	--	--	2
62.	Mr.Ezhumalai P	CS	2	--	--	--	--	1
63.	Mr.P.C.Kishore Raja	CS	2	--	--	--	--	1
64.	Dr.M.J.S.Rangachar	EC	2	--	--	--	--	--
65.	Mr.S Ganesh Vaidyanathan	EC	4	--	--	--	--	--
66.	Dr.R.Amutha	EC	1	--	--	--	--	--
67.	Dr.N.Venkateswaran	EC	1	--	--	--	--	--
68.	Mr.D.Dhanasekaran	EC	2	--	--	--	--	--
69.	Dr.G.A.Sathish Kumar	EC	6	--	--	--	--	--
70.	Dr.H.Umma Habiba	EC	2	--	--	--	--	--
71.	P.Sasikala	EC	1	--	--	--	--	--
72.	Dr. KR.Santha	EE	3	--	0.083	2.306	--	2
73.	Dr.M.Gopalakrishnan	EE	2	--	0.036	0.796	--	1
74.	Mr.K.Sundararaman	EE	2	--	0.036	0.796	--	1
75.	Mr.R.Karthikeyan	EE	4	--	0.033	0.493	--	1
76.	S. G. BharathiDasan	EE	6	--	0.033	0.493	--	2
77.	Mr.N.Senthilmurugan	EE	1	--	--	--	--	--
78.	Mr.M.Prabhakar	EE	4	--	--	--	--	--
79.	Ms.S.Arulmozhi	EE	1	--	--	--	--	1
80.	Mr.D.Elangovan	EE	1	--	--	--	--	--
81.	Mr.T.Annamalai	EE	1	--	--	--	--	--
82.	Ms. D.Kavitha	EE	1	--	0.057	1.408	0	0
83.	Ms.S.Sumalatha	EE	2	--	--	--	--	--
84.	Ms.N.Shanmugavadivu	EE	2	--	--	--	--	--
85.	Mr.I.Venkatraman	EE	1	--	--	--	--	--
86.	Ms.S.V.Nagalakshmi	EE	1	--	--	--	--	--
87.	Dr TMurugavel	HS	1	--	--	--	--	--
88.	Dr T Ravindran	HS	1	--	--	--	--	--
89.	Amutha Charu Sheela	HS	3	--	--	--	--	--
90.	Dr.G. Sumathi	IT	15	3.2	--	--	0.594	--
91.	Dr.N.Kumaratharan	IT	19	3.8	--	--	0.402	--
92.	K.Thaiyalnayaki	IT	5	--	--	--	0.42	--
93.	S. Swarna Parvathi	IT	7	2	--	--	0.57	--
94.	P. Leela Rani	IT	6	--	--	--	0.33	--
95.	N. Revathi	IT	4	--	--	--	0.16	--
96.	D.Jayanthi	IT	4	--	--	--	0.25	--
97.	T. Sukumar	IT	2	--	--	0.4	0.1	--
98.	L.Anita Elizabeth	IT	1	--	--	--	.16	--
99.	K.Suresh	IT	1	--	--	--	--	--
100.	Dr.Venkatesan A,	ME	7	--	--	--	2.98	--
101.	Dr.R.Ramesh	ME	5	--	--	--	2.43	--
102.	Dr.Nallusamy N	ME	4	--	--	--	1.7	--

S. No	Name of the Faculty	Dept	No of Publications	Av.Citation Index	SNIP	SJR	IF	H Index
103.	Dr.Padmanabhan K	ME	2	--	--	--	2.3	--
104.	Dr.Muthukrishnan N	ME	2	--	--	--	3.17	--
105.	Dr.Venkatesan.J	ME	11	--	--	--	2.3	--
106.	Dr.Pitchandi K	ME	3	--	--	--	2.3	--
107.	Arockia Selvakumar.A	ME	11	--	--	--	3.176	--
108.	Vinayagamoorthy R	ME	1	--	--	--	0.223	--
109.	Dr.Raja T	ME	1	--	--	--	1.1	--
110.	Ilaiyavel S	ME	11	--	--	--	2.07	--
111.	Ramanujam R,	ME	4	--	--	--	1.469	--
112.	Ramesh babu S	ME	1	--	--	--	1.7	--
113.	Gopinath S	ME	1	--	--	--	0.8	--
114.	Prem Ananth M	ME	3	--	--	--	2.43	--
115.	Mohandass M	ME	1	--	--	--	--	--
116.	P.Raghu	ME	2	--	--	--	1.7	--
117.	Prof.S.Krishnan	MR	01	16	--	--	--	--
118.	L.Poovazhagan	MR	01	--	0.158	0.030	0.158	--

Our students and faculty members have got rich record of publishing the research journals in reputed national / international journals. This section gives the full details of Impact Factor and Citation Index for their publications. The total number of International journal publications in the last five years by our faculty members is 486 and the total number of National journal publications in the last five years by our faculty members is 26.

The total number of International journal publications in the last five years by our students is 67 and the total number of National journal publications in the last five years by our students is 04.

Details of are given below: (The numbers in the square brackets are [Impact Factor] and [Citation Index]. The details of all publications is available in **Appendix 3.4 A**.

The following books have been written by our faculty members and are much praised by both students and academia for good contents and quality writing .

S. No.	Name of the Book	Name of the Author with Designation and Department	Name of the Publisher	Year of Publication
1	Machinability studies of composite materials	Dr.N.Muthukrishnan Professor, AE	Lambert academic publishing	2012
2	Engineering Physics	Dr.A.Bhaskaran Professor, AP	Oxford	2010
3	Molecular mechanism of fluoroquinolone resistance for M.tb isolates	Mrs.Sulochana Somasundaram, Professor, BT	LAMBERT Academic Publishing	May 2011
4	A Preliminary study about the Effect of Mangiferin on Isoproterenol Induced Myocardial Infarction in Rats	S. Prabhu, Associate Professor, BT	LAMBERTS Academic Publishing,	Nov 2011

5	Interpersonal Communication and Essential Jobs Skills	Dr.Ravindran T Professor, HS	Oxford University Press	2010
6	Anaerobic Digestion in a Tapered Fluidized Bed Reactor'	Dr.R.Parthiban Professor, CH	LAP LAMBERT Academic Publishing	2010
7	Heat and mass transfer studies on different leather materials'	Dr.R.Parthiban Professor, CH	LAP LAMBERT Academic Publishing	2011
8	Heat and Mass Transfer Studies in an Annular Circulation Fluidized Bed'	Dr.R.Parthiban Professor, CH	LAP LAMBERT Academic Publishing	2011
9	Management of Industrial Tannery Solid Waste for biogas production	Dr.R.Parthiban Professor, CH	LAP LAMBERT Academic Publishing	2010
10	A Novel Separation Technique using Hydrotropes'	Dr.R.Parthiban and Dr.N.Meyyappan Professor, Dept of CH	LAP LAMBERT Academic Publishing	2011

#### 3.4.4 Provide details (if any) of Research awards received by the faculty

- Dr. Sudhakar K Bharatan, Associate Professor, EEE won a cash prize of Rs. 1000 for his presentation on "single walled carbon nanotube synthesis using plasma enhanced chemical vapor deposition for optoelectronic and ballistic applications" on faculty research day (16/03/13)
- Ms.S.Aarthy, Ms.Divya Sridharan, Ms.G.Gomathi, from EEE Final Year mentored by Ms .G.Aarthy (AP/EE) won I prize in presentation on stage contest held on student research day (07/03/13)
- Mr.R.Muralikrishnan, Mr.N.Phaneendra Boyapati, Mr.M.Mohammad Imran, Mr.Mukesh, from EEE Second Year, mentored by Mr. A Tamizhselvan (AP/EE) won second prize in poster contest held on student research day (07/03/13)
- Project titled "ELECTRONIC BALLOT BOX", done by Final Year Students Mr.Meiyappan,Mr.Niranjan Balaji and Mr.Mahadev Subramanian from the 2008-12 batch of Electronics and Communication Engineering department mentored by Mr. S.Senthil Rajan (AP/EC) has been selected as a best project under the Innovative Student Projects Award-2012 given by Indian National Academy of Engineering, Delhi
- Anirudh Vasudevan, M G Chandrasekar, from EEE IV yr A sec, mentored by Mr. D. S. PurushothamaN (AP/EE) won first prize in model making contest held on student research day (07/03/13)
- PG Project by Ms.N.Priyanka guided by Dr. KR.Santha, titled , 'A Boost Converter with an Active Clamp Circuit for High Intensity Discharge

Lamp Application' received the Innovative Student Projects Award - 2011 by the Indian National Academy of Engineering (INAE), Delhi.

- UG Project by Mr.Vijay Karthick guided by Dr. KR.Santha, titled , 'SMART-The Automated Food Concocter' received the Innovative Student Projects Award - 2011 by the Indian National Academy of Engineering (INAE), Delhi

### **Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally**

- Good number of faculty members in each departments are recognised as Supervisors for guiding M.S./ Ph.D Scholars under Anna University, Chennai.

### **Incentives given to faculty for receiving state, national and international recognitions for research contributions**

- To encourage quality research work by faculty members, the college management continues to give the following incentives
- An incentive of Rs 5000 is given for publishing their research work in International Journal.
- An incentive of Rs 3000 is given for publishing their research work in National Journal.
- A proportionate amount is awarded to the Principal Investigators who is carrying out a funded project .

## **3.5 CONSULTANCY**

### **3.5.1 Give details of the systems and strategies for establishing institute-industry interface?**

- Institute-Industry Interaction Cell of each department interacts with industry to ascertain its needs and if these needs are felt missing in the curricula, the gap is filled by hosting special classes and by providing the required teaching for the students.
- Centralized placement cell of the institution also interact with industries to know their job requirement and the placement officer of this institution acts as a liaison officer between the companies and college management.
- Our college has good alumni base who are currently working with many reputed companies. This group certainly helps us in campus placements
- An assessment is made periodically by the department to ensure the employability objectives of the department – which make sure to prepare the students on par with industry standards.
- The Industry-Institute Interaction Cell of the department aids in the assessment of student related industry objectives of the department. The degree to which the objectives are attained is presented in review meeting

conducted by our college level Industry Objective Leader and the proper remedial action is taken in the event of any non accomplishment of set objectives.

- Institute-Industry Interaction Cell of each department convene for a meeting with various Industries by inviting expert personals every semester to explore the possibility of making new technical collaboration
- IIC explores the possibility of our students to undergo in-plant training and to carry out their academic project work in such industries and also depute our faculty member to undergo industrial exposure during their vacation in reputed industries
- Entertaining the industry in the IIC Cell by engaging them in the following activities
  - ✓ Consultancy projects
  - ✓ Educating the working engineers at Industries through possible interaction with our faculty members
  - ✓ Inviting industry experts for our UG/PG students for guest lecturers
  - ✓ Providing training at our laboratories for the working Engineers at industries
  - ✓ Conducting joint technical programs and events

**3.5.2 What is the stated policy of the department to promote consultancy? How is the available expertise advocated and publicized?**

- During IIC meeting and also through our placement officer the facilities available in the each department and also the possible collaboration arrangements were explained to the experts from various industries.
- Consultancy works are very much allowed to carry out in house with the available equipments in the department.
- Periodically the updated literature about the institution has been sent to prospective companies highlighting the latest achievements including the facilities available with the department
- Major areas of expertise are advertised through department homepage in the main college website and also through technical events/programmes, customized e-mails and public aware talks.
- Industrial problems are always solicited to provide solution through expertise of faculty members

**3.5.3 How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?**

- Faculty members are always encouraged by reducing the academic and administrative work load while executing consultancy works with the available equipments without any limitation
- Incentives were given to Principal Investigator from the fund generated through consultancy. 2% of amount incurred towards non recurring is given to Principal investigator.

- Each department is motivated to develop the multi disciplinary faculties to address the present needs of both students and industries
- The department encourages faculty members to visit industries to supervise the project work carried out by the students in industries and ascertain the possibilities for any consultancy/collaboration activities.
- Through personal visits to industries in order to obtain consultancy work
- Always the labs are made available to industry members by extending the working hours of laboratories.

**3.5.4 List the broad areas and major consultancy services provided by the institution and the revenue generated during the last five years.**

The following are the major areas which does indicate our expertise in providing the leading edge consultancy services

- ✓ IC Engines-Engine Testing
- ✓ Material testing
- ✓ Thermodynamic Modeling of Automotive Compressors
- ✓ Alternative Fuels, Bio Fuels
- ✓ Mechanical Design
- ✓ Tribology
- ✓ Mechanical Vibration

**Appendix 3.5 A** provides the nature of consultancy job executed with our clientele base.

The revenue generated from consultancy works over the last five years is furnished in **Appendix 3.5 B**.

**3.5.5 What is the policy of the institution in sharing the income generated through consultancy (staff involved: Institution) and its use for institutional development?**

The policy of the department in sharing the income generated through consultancy is 40:60 basis (staff involved: Institution). There by Sixty percentage (40 %) of the total charges received from the company for the consultancy work will be disbursed to the faculty who are executing the consultancy work.

**3.6 EXTENSION ACTIVITIES AND INSTITUTIONAL SOCIAL RESPONSIBILITY (ISR)**

**3.6.1 How does the institution promote institution-neighborhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?**

The student community is being helped by implementing the government reservation schemes and offering good scholarships for both merit and economic basis. The major strength of this college is its



ability to ensure holistic development of students to make them responsible citizens by teaching the moral values.

The college management always motivates the students' social participation and also drives to achieve its goal of providing higher technical education to create equitable society with ethical values. To provide quality based education to the students by inculcating moral values, scientific temper and employing state of art technologies.

It aims to pursue excellence towards creating students with high degree of intellectual, professional and cultural development to meet the national and global challenges.

The institute is conscious of its role in campus community connection, wellbeing of its neighborhood and has initiated a number of community development activities. These activities does include

- ✓ Organizing NSS & NCC Camps
- ✓ By involving students in Blood Donation Camps
- ✓ Making the college playground available to neighboring communities on weekends
- ✓ Conducting the flag hoisting at national festival involving the local government authorities and college NCC cadets

### **3.6.2 What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?**

Through faculty advisors, the student involvement in various social movement activities is observed and also motivated. Faculty advisors are the one to give the required permission to students for participating in such activities and continuously to monitor their progress in such extension activities. Faculty advisor has to file the student achievement in such extension activities in the respective advisor file for record purposes.

Extra-curricular activities and value education provides avenues to students to become aware of the social environment, the social evils, citizen responsibility and individual contribution to make the society a better place to live. Periodic and regular meetings are conducted for highlighting the social and ethical values.

### **3.6.3 How does the institution solicit stakeholder perception on the overall performance and quality of the institution?**

The stake holders are invited to visit the campus and its various infrastructural facilities, interact with the members of faculty to obtain necessary information on the overall performance and quality of institution. Parent-Teachers meeting are regularly being conducted to

know about academic performance and quality of their wards and to provide constructive suggestions to improve the overall performance and quality of their wards and quality of institution. Periodically performance reports are being sent to the stake holders through SMS, e-mails, web publication and also through hard copies.

**3.6.4 How does the institution plan and organize its extension and outreach programmes? Providing the budgetary details for last four years, list the major extension and outreach programmes and their impact on the overall development of students**

The college is continuously organizing a number of extension and outreach activities which is directly connected with students academic, social, cultural, community services etc., The college management with the help of many voluntary organizations and NGOs organizes the outreach programs.

The Leo Club has conducted several blood donation camps and tree plantations. The expenditures for the same are generally borne by such organizations if any is being reimbursed by our college.

Appendix 3.6A provides the major extension and outreach programmes organized under the banner of National Service Scheme and Leo Club of SVCE with the details of faculty and student participation.

**3.6.5 How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?**

The college performs various activities through NCC, NSS, Leo Club, NGOs and other forms of community development services. During induction, the coordinators of these sections will narrate students on the benefits and scope of the extension activities. The information about the proposed activities is disseminated on the college notice board, circulars, web notifications, and also by oral interaction / briefing by section in charges.

**3.6.6 Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?**

Our College NCC offers opportunities to the cadets for personality development, participation in adventure activities, travel abroad through youth exchange programme, sailing on board naval ships, participation in Republic day parade at Rajpath, New Delhi. NCC training also prepares cadets mentally as well as physically for facing the challenges and emergencies in day to day life. The role of NCC cadets in assisting the governmental organizations in handling is natural calamities is very well recognized and appreciated. NCC cadets

also assist the police in traffic control.

NCC Army wing has conducted three blood donation camps and two trekking camps apart from the annual training camps attended by the cadets who have received many awards.

NCC Naval division was inaugurated on 12<sup>th</sup> September 2003 with a sanctioned strength of 50 cadets. NCC Naval division in our college is attached with 4 (TN) Naval Tech NCC Unit, Which is the only Naval technical unit in India.

NCC Air wing has organized three blood donation camps, two tree plantation programs, a cancer awareness program, an anti-plastic rally and a cycle expedition apart from the annual training camps taken part by the cadets.

Our College is one of the very few institutions in India having all three wing of NCC namely Army, Navy and Air Force.

**3.6.7 Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students' academic learning experience and specify the values and skills inculcated.**

A total of 20 parades by NCC Naval wing had been conducted during 2009-10 and many such parades thereafter regularly being conducted for our cadets and were given regular training as per the training syllabus. The syllabus covers common subjects such as Drills, Leadership qualities, First aid, Health and hygiene, National Integration, Adventure activities, Social service, Ecology and environmental protection. The technical subjects include ship construction, Ship propulsion machinery, Auxiliary machinery systems and control systems.

They were also trained in fire fighting, Damage control in Nuclear, biological and chemical warfare. Cadets were trained in rigorous exercise in physical training and cross country

**3.6.8 How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?**

Our management is very generous in giving scholarship to the cadets who excel in NCC, NSS and to other sections involving in extension activities apart from the merit scholarship schemes. Each semester a Scholarship of Rs.20 000/- and instruments grant of Rs.3000/- are awarded to the deserving cadets in each division. The college also provides special consideration / permissions for our students to attend these camps

**3.6.9 Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.**

The college has many constructive relationships with other organizations and few of them are given below to highlight our interactions with other esteemed organizations.

Transparent Chennai / [www.transparentchennai.com](http://www.transparentchennai.com) /

ROB – Reclaim Our Beaches / [www.letsrob.com](http://www.letsrob.com) /

Environment Monitoring and Action Initiating / [www.emai.org.in](http://www.emai.org.in) /

MOU/Collaboration arrangement with many industrial establishment for ex., Best third year EEE student award is being sponsored by M/s Panickker Switchgear. Faculty members are also encouraged to visit the factory for getting the required exposure.

**3.6.10 Give details of awards received by the institution for extension activities and / contributions to the social / community development during the last four years.**

SVCE students won EARTHIAN 2012 Award instituted by WIPRO pvt ltd.worth INR 1.5 Lakhs

SVCE students won the First Prize at MOBILiZE U 2012 conducted by the Earthday Network, Washington DC, USA in which 300 Universities from 51 countries participated.

Mr. Ramesh Rajesh, Final Year EEE won the International Climate Champion 2012, organized by British Council and TERI, India

Sujatha Krishnaswamy (2007-2011) has won the Innovative Student Projects Award 2011 for the paper “A Certificate designated verifier ring signcryption scheme-Design and Implementation”.

Snehitha Addanki (2007-2011) is selected as the IBM DB2 Student Ambassador 2010 for our College.

S. Rajesh (2006-2010) was honored with the IBM Information Champion Award-2010.

Ms. Madhumita Madavan, Final Year EEE won the International Climate Champion 2010, organized by British Council and TERI, India.

**3.7 COLLABORATION**

**3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities. Cite examples and benefits accrued of the initiatives - collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.**

Through interactive sessions with industry experts by way of periodic meetings

- ✓ Deputing faculty members for exposure to industrial practices
- ✓ In plant training and industrial visits for students
- ✓ Guest lectures by industry experts on state of art technologies
- ✓ Getting permission to carry out experiments in institutes of repute
- ✓ Permission to make use of software and hardware by research candidates of other institution
- ✓ Allowing incubation of startup companies
- ✓ Faculty sent on sabbatical leave to other institutes of higher learning through faculty exchange Programme.
- ✓ Our college interacts with the following State, National and International organizations for executing various research activities as detailed in **Appendix 3.7A.**

**3.7.2 Provide details on the MoUs/collaborative arrangements (if any) with institutions of national importance/other universities/industries/Corporate (Corporate entities) etc. and how they have contributed to the development of the institution.**

The institution has signed 19 MoUs under various departments and covering activities like Training, Placement, Development of training facilities for students, Guest Lectures, Participation in technical events etc. Some of the important organizations with which MoUs have been signed are: HCL Technologies, Ericsson, IIT, Madras, TAFE, Cochin Ship Yard Ltd, London South Bank University etc. as given in **Appendix 3.7B.**

**3.7.3 Give details (if any) on the industry-institution-community interactions that have contributed to the establishment / creation/up-gradation of academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories / library/ new technology /placement services etc.**

- M/s TAFE has donated a tractor for Automobile Engineering lab and has instituted a best project award for the final year project work.
- Organizations like HCL, TAFE, Cognizant etc. have executed agreements for regular recruitment drives.
- The college has established a lab in collaboration with the Institute of Plasma Research, Ahmadabad and SPIC Pharma on improving the antibiotic producing strains.
- The college has established a lab in collaboration with Ericsson and Indian institute of Technology, Madras.
- Three laboratories namely, English language lab, Biotech Research Lab and Free and Open Source Software lab have been established in the college with sponsorship from Cognizant Technology Solutions.

- Hyundai Motor India ltd has donated two vehicles for the Automobile engineering lab.
- M/s Gemini Communications has offer technical expertise for establishment of Cyber forensics lab.In-plant Training is also regularly being offered to our students
- Items worth Rs.24,00,000 have been purchased by the Department of Bio Technology Department for collaboration with Industries.
- A research laboratory was set up in the department of computer science and engineering. It is equipped with high-end desktop systems funded by Cognizant worth Rs.6,00,000.

**3.7.4 Highlight the names of eminent scientists/ participants who contributed to the events, provide details of national and international conferences organized by the college during the last four years.**

Around 25 events were organized (Details available on request ) at the National and international level by the various departments and some of the eminent personalities who participated in these events are:

1. Prof. Buddy D Ratner, Director, Engineered Biomaterials (UWEB), University of Washington
2. Mr..G.Balasubramanian, Head (Technical),IBM India
3. Mr.P.Kaliraj, Director and Head, CBT, Chennai
4. Dr.K.Sridhar, Head, Communication systems division, SAMEER,Chennai
5. Dr. S.Vengadesan, Asst. Professor, Department of Applied Mechanics, IITM, Chennai -36
6. Dr. A.Rajadurai, Professor & Head, Department of Production Technology, Anna university, Chennai
7. Dr.Arun Pachai Kannu, Prof, EE dept, IIT, Chennai
8. Mr.A.Raja Rajan, Associate Project Manager, HCL, Chennai
9. Mr.S.Ganesh kumar, Applications Engineer, National Instruments
10. Mr.M.Kannappan, General Manager, BHEL
11. Mr.A.Dayalan, Manager, Vestas Wind Technology (I) Pvt. Ltd.
12. Dr.A.Krishna Vasudevan, Professor, Electrical Engg Department, IITM
13. Mr.Krishnan ShivaSubramanian Director -Projects Cognizant Technology Solutions,Chennai
14. Dr.V.Vaidehi, Prof and Head, IT dept, MIT,Chennai
15. Mr.K.Vimal Kumar, Solution line Manger,ALCATEL Lucent India Ltd.
16. Dr.K.Ranganathan, Central Pollution Control Board, New Delhi
17. Mr.Rajesh Roy, Director, Telcordia India Labs, Chennai
18. Mr.Anandan Balasubramanian, Associate General manager, HCL Technologies, Chennai
19. Dr.Shanti Swarup, Prof., IIT Madras
20. Prof. Ram Mohan, Professor, Department of Nano Engineering, North Carolina A&T State University

21. Prof.Vijay Krishnan Narayanan, Department of Computer Science, Penn State University

**3.7.5 How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated -**

**a) Curriculum development/enrichment**

Department of Biotechnology of SVCE entered into the MOU with Rajalakshmi Engineering College, Thandalam and the arrangement is made to suggest the necessary changes to Anna University, Chennai to enrich the academic curriculum.

SVCE through the MOU with London south bank University will get valuable inputs to raise curriculum standards on par with International standards.

**b) Internship/On-the-job training**

Every department has MOU arrangements with other leading industries to depute their students for internship or on the job training in their field of expertise. Ex., Department of Biotechnology through the MOU with M/s. Kumar Organics Pvt. Ltd, Bangalore, M/s. Brain wave solutions Pvt. Ltd, Chennai, M/s. Innovative Health care Pvt. Ltd, Chennai and CLRI, Adyar sends students for getting possible internship and on the job training in the field of Biotechnology. Similarly Electronics & Communication Engineering students are going for Internship and final year curriculum projects to various Research organizations and Industries like SAMEER, Bharath electronics etc.

**c) Summer placement**

Students are encouraged summer placement at various organizations such as BSNL and Ashok Leyland.

**d) Faculty exchange and professional development**

M/s. Telcordia Chennai have given training for two Electronics & Communication faculty members during summer vacation on various aspects of Telecommunication industry.

Training for R&D Engineers provided by SVCE faculty members for Western Thomson, Chennai

**e) Research**

Various workshops and conferences are regularly being organized at SVCE using MOU arrangements.

5 Research Projects are being pursued in the lab using such collaborative arrangement with Ericsson and IIT, Madras.

11 technical events conducted in the Cognizant sponsored Free and Open Source lab.

**f) Consultancy**

- Collaboration with M/S GATES UNITTA INDIA resulted in consultancy assignments
- Department of Biotechnology have signed a MOU with
  - M/s. Kumar organics Pvt. Ltd, Bangalore for use of Spray drier, Microfiltration, Ultrafiltration (Biopolymer processing)
  - M/s. Innovative Health care Pvt. Ltd, Melmaruvathur, for Spray drier (processing of vegetarian protein liquid)

**g) Extension**

SVCE has strong and very active collaboration arrangement with good number of NGO / Service Organization for doing lots of extension activities and the same is mentioned in the section 3.6

**h) Publication**

Many publications by students and faculty resulted due to collaborative / MOU arrangements with industries / research laboratories which is duly furnished in section 3.4.

**i) Student Placement**

- Collaboration with industries like M/s TAFE, M/s. SAMEER etc., resulted in students placement
- A large number of esteemed organizations visit our campus for giving students placements regularly. HCL, WIPRO, CTS, INFOSYS are few among them.

**j) Twinning programmes** : Nil

**k) Introduction of new courses**

Two new PG courses ME-Applied Electronics and ME-Mechatronics were started in the academic year 2012-13. UG student intake had been increased from the previously sanctioned intake in few departments from the year 2012-13.

**l) Student exchange**

Our collaboration with M/s. London south bank University and M/s. Rajalakshmi Engineering College is intended for exchange of faculty and students for mutual benefit.

**m) Any other**

**Recently M/s. Gemini Communications Limited (GCL) signed MOU with SVCE,** to enhance the Industry Institute Interaction. They delivered a series of special Lectures on “Ethical Hacking and Computer Forensics”. As part of the MOU, GCL has set up a “FORENSICS LAB” in the College and also organize suitable short term and long term courses.

**3.7.6 Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations.**

- ✓ Institution has planned and established linkages/collaborations related to



academic and research activities with various industries and research institutes to implement training programs for students and faculty members in various specializations.

- ✓ College enters into MOU arrangements with various establishments mainly to establish the linkages / collaborations related to academic and research activities. For ex., Department of Biotechnology through the MOU with Kumar organics Pvt. Ltd, Bangalore, Brain wave solutions Pvt. Ltd, Chennai, Innovative Health care Pvt. Ltd, Chennai and CLRI, Adyar
- ✓ Inviting Expertise from various divisions from other industries for delivering Guest Lectures, key note address in Conferences, invited speaker in workshops and symposiums.
- ✓ Conducting joint technical programs and events with other organizations. Around 306 Guest Lectures, 69 Workshops, 14 Conferences, 39 Symposia , 824 Internships and 179 Industrial visits have been organized with the help of various collaborating agencies.
- ✓ Establishing Industry Institute Interaction cell in the department and conduct of periodical meeting of the cell.

#### **CRITERION IV :**

### **INFRASTRUCTURE AND LEARNING RESOURCES**

#### **4.1 PHYSICAL FACILITIES**

##### **4.1.1 What is the policy of the institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?**

- The management has a positive approach towards creation and enhancement of infrastructure of the institution. The institution interacts frequently with parents, teachers, Alumni and students for creation & enhancement of its infrastructure.
- Necessary budget is allocated for creation enhancement & up-gradation of infrastructure.
- The Policy of the management is :
  - Providing adequate space for effective teaching & learning process like;
    - Reading room has been expanded for accommodating more students.
    - The computer lab has also been expanded.
    - New infrastructure has been created for separate departments like;
      - Examination Committee
      - Separate department for each UG and PG Courses.
      - Vice-Principal's office.
      - Deans' Office
      - Conference room facility with a capacity of 50 seats.

- To obtain & utilize funds (in terms of money) from various funding agencies like,
  - University, UGC, AICTE etc.
  - The funds obtained from AICTE have been well utilized for expansion of research infrastructure, use of ICT and other developmental activities.

#### **4..1.2 Details the facilities available for**

- Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, Animal house, specialized facilities and equipment for teaching, learning and research etc.
- Extra –curricular activities – sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.

#### **(a) Curricular activities?**

The College is situated in an area of 93.60 acres. The total area of building constructed is 66868.43 sq.m consisting of 84 Class Rooms which includes 17 Smart Class Rooms, 11 Seminar Halls, 2 Drawing halls, 57 Laboratories, 6 Workshops, One air-conditioned Conference Hall, Central library, Staff Rooms (196), Administrative Block, Canteen, Hostels, Swimming Pool, Reverse Osmosis Plant, Dispensary and Staff Quarters. Campus wide networking using fiber optic link and Ethernet CAT5 is available.

There are 11 common rooms (4 for boys, 7 for girls) and 112 Toilets (61 for gents, 51 for ladies)

#### **(b) Co-curricular activities?**

The College provides avenues for developing technical skill, updating knowledge on state-of-the-art subjects, personality development and service to the society through the following professional societies and associations, each of which is facilitated by a faculty adviser who guides the students.

- Society for Mechanical Engineers
- Electronics and Communication Engineer's Association
- Association of Computer Engineers
- Association of Automobile Engineers
- Association of Marine Engineers
- Association of Electrical and Electronics Engineers
- Association of Chemical Technologists

- Association of Information Technologists
- MCA Students' Association
- Society for Automotive Engineers (SAE)
- Institute of Electrical & Electronics Engg (IEEE) - Student Branch
- Indian Society for Technical Education (ISTE)- Student and Staff chapters
- Indian Institute of Chemical Engineers (IChE) – SVCE Student Chapter
- Indian Society for Training & Development (ISTD)
- National Cadet Corps (NCC) - Army, Air Wing and Navy Wing
- National Service Scheme (NSS)
- Youth Red Cross (YRC)
- Leo Club
- Rotaract Club
- Tamil Mandram
- Speakers Forum
- FORSE - Forum for Economic Studies by Engineers
- MATHS FORUM and
- Music Club.

**Activities of the above associations and clubs are as follows.**

- Conducting seminars, workshops, special lectures, educational and industrial visits, paper presentation contests, design contests, symposia, technical quizzes, etc., are some of the activities of these Associations.
- The College also has Institutional Membership of Indian Society for Technical Education, New Delhi, Indian Society for Technical Development, Institution of Electrical and Electronics Engineers, Madras Management Association, Society of Automotive Engineers, Indian Institute of Chemical Engineers, Institution of Engineers, Computer Society of India, Central Institute of Plastics Engineering & Technology.
- Five air-conditioned halls are available for the above activities.

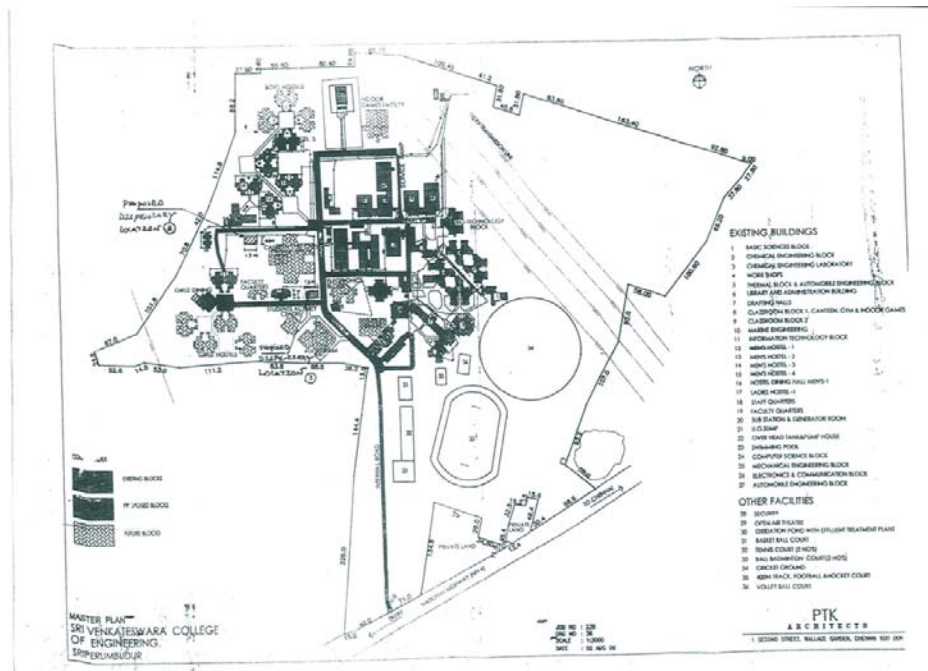
**(c) Extra –curricular activities and sports?**

- Total area of the play ground - 15 acres.
- Facilities for outdoor games - Basket ball court (1), Volley ball court (2), Hockey field (1), Football field (1), Cricket field (2 - Turf wicket), Tennis court (2 - 1 Clay and 1 synthetic court), Ball badminton court (2)
- Facilities for indoor games - Table Tennis, Carom, Chess
- One swimming pool
- One gymnasium

**4.1.3 How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally**

utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution/ campus and indicate the existing physical infrastructure and the future planned expansions if any).

- **Plan and optimal utilization of the available infrastructure.**
  - All our activities have been brought under the ISO quality system. By assessing the requirements and availability periodically through reviews, the infrastructure is optimally utilized.
  - Common facilities like computer laboratory, library, I year laboratories, Seminar halls etc. are utilized by all departments.
  - Library has long working hours (8AM to 8 PM) with internet facilities on all days including Saturday and Sunday.
  - Server is maintained 24 hours with technicians working in shifts.



### Master Plan of the Campus

- **Facilities/infrastructure developed/augmented to keep pace with its academic growth and the amount spent during the last five years.**

Year	2009-10	2010-11	2011-12	2012-13
Student - annual intake (into I year)				

	<b>U.G.</b>	753	834	830	995
	<b>P.G.</b>	123	158	189	212
<b>Amount spent (lakhs)</b>	<b>Land</b>	..	..	..	--
	<b>Buildings</b>	278	306	721	1065
	<b>Furniture</b>	43	16	64	45
	<b>Equipment</b>	113	101	104	93
	<b>Computers</b>	421	51	47	128
	<b>Vehicles</b>	-	-	30	32

**4.1.4 How does the institution ensure that the infrastructure facilities meet the requirements of the Differently-Abled (DA) students?**

The college assesses the requirements of differently-abled students based on the number of students admitted in this category. Ramp and special toilets are being provided in the buildings accordingly.

**4.1.5 Give details on the residential facility and various provisions available within them:**

(Hostel Facility – Accommodation available, Recreational facilities, gymnasium, yoga center, etc., Computer facility including access to internet in hostel, Facilities for medical emergencies, Library facility in the hostels, Internet and Wi-Fi facility, Recreational facility-common room with audio-visual equipment, Available residential facility for the staff and occupancy Constant supply of safe drinking water and Security)

○ **Hostel Facilities**

- Separately Blocks for boys and Girls
- No of Blocks : 7 Blocks for Boys and 3 Blocks for Girls
- Total No. of Rooms in the Hostel –  
348 Rooms for Gents and 144 Rooms for Girls

○ **Occupancy Details**

Details	Gents Hostel							Ladies Hostel			Total
	Block I	Block II	Block III	Block IV	Block V	Block VI	Block VII	Block I	Block II	Block III	
Hostel Office room	3	0	0	0	0	0	0	0	0	0	3
Resident tutors	2	2	2	2	2	2	2	2	2	2	20
Staff room	0	2	0	0	0	0	0	0	0	2	4

Guest room	3	0	0	3	6	0	0	0	0	0	12
Students	94	98	100	97	94	94	192	96	96	97	1058
Vacancy	0	0	0	0	0	0	0	0	0	0	0
										Total	1097

- **Recreational facilities**
  - Common room with cable TV and magazines / Newspaper in every block.
  - A well equipped gymnasium is available in the college.
  - Sports and Games (Indoor and Outdoor) facilities
  - Cricket, Volley ball, Basket ball, Ball badminton, Tennis, Swimming (on campus swimming pool), Football, Hockey, 400 m track, In house Gym, Table tennis, Carom, Chess.
- **Staff Quarters**
- 9 Staff Quarters and 1 Guest House – fully furnished
- Available all amenities
- **Computing Facilities including Internet & Wi-Fi**
  - WiFi Connection Available for Hostel Blocks

**4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?**

- **On Campus**
  - 6 bedded dispensary (310 sq.m) on campus
  - Full time medical officer
  - Residential staff nurse
  - ECG facility
  - Ambulance
  - First aid boxes at key locations
- **Off Campus**
  - Tie up with local hospital
  - Medical reimbursement scheme for all staff members when hospitalized.

**4.1.7 Give details of the Common Facilities available on the campus – spaces for special units like IQAC, Grievance Redressal unit, Women’s Cell, Counseling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.**

- **IQAC**
  - There is a separate room is allotted for IQAC with system with internet connection.

- Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks
- The relevance and quality of academic and research programs
- Equitable access to and affordability of academic programs for various sections of society
- Optimization and integration of modern methods of teaching and learning
- The credibility of evaluation procedures
- Ensuring the adequacy, maintenance and functioning of the support structure and services
- Research sharing and networking with other institutions in India and abroad
- Development and application of quality benchmarks/parameters for the various academic and administrative activities of the institution
- Dissemination of information on the various quality parameters of higher education
- Organization of workshops, seminars on quality related themes and promotion of quality circles
- Documentation of the various programs / activities leading to quality improvement
- Acting as a nodal agency of the institution for quality-related activities
- Preparation of the Annual Quality Assurance Report (AQAR) to be submitted to NAAC based on the quality parameters.
- The composition of the IQAC may be as follows:
  - Chairperson: Head of the Institution
  - A few senior administrative officers
  - Three to eight teachers
  - One or two members from the Management
  - One of the teachers as the coordinator of the IQAC.
- **Grievance Redressal Cell**
  - Headed by senior professor
  - Senior faculty members from departments
  - Student representatives are also members
  - address the problems of students and staff
- **Women's Cell**
  - Headed by senior professor
  - Senior women faculty members from departments
  - Student representatives are also members
  - address the problems of women students and staff
- **Counseling and Career Guidance**
  - One senior professor is in-charge for each year of students
  - For PG, one separate senior professor is incharge
  - provide career guidance and counseling
- **Placement Unit**
  - Headed by Senior Professor

- takes care of training, soft skill and placement related activities
- maintaining relationship with companies
- arranging FDP for faculty members
- arrangement of students internships/ summer courses/projects
- **Canteen**
  - Canteen is run by College in an area of 740 sq.m and seating capacity of 450.
- **Auditorium**
  - Open Air Auditorium – 4278 SQM
- **Other facilities**
  - Staff rooms provided for every staff individually
  - Six common rooms for lady students available
  - Rest rooms (toilets) in every block in every floor
  - Three standby diesel gensets (250 kVA, 380 kVA and 500 kVA) for power backup
  - Adequate bus & other vehicle parking available
  - Dedicated buses are being operated for students from Chennai
  - Telephone landlines – 20, 2 fax numbers, 300 lines EPBAX, 256 intercoms.
  - Drinking water supplied in every floor from the in-house RO plant.
  - Civil Maintenance Cell takes care of planning and construction of building and maintenance of buildings, gardening and House Keeping works – Consisted of 12 regular staff and 150 contract staff
  - CCTV cameras installed in the Campus
  - Three cars and one ambulance are available.
  - Transport - 60 buses are available for students and staff members.
  - Separate transport is available for HODs.
  - A dispensary with a full-time doctor and nurse is available.

Details of various facilities available are :

<b>Details</b>	<b>Number</b>	<b>Area (sq.m)</b>
HODs room	16	344
Teaching Staff rooms	196	2650
Girls – Common Room	4	145
Boys – Common Room	7	99
Canteen	2	788
Open Air Theatre/Auditorium	1	4278
NCC	2	39
Indoor Games	1	394
Gymnasium	1	197
Dispensary	1	310



Bank	1	36
Estate Maintenance	4	74
Sub-station	1	266
Telephone Booth	1	5
Shop	2	39
Alumni	1	39
Gents Toilet	61	678
Ladies Toilet	51	482
Guest House	1	108
Transport (buses) (open area parking)	60	8000
Car & Two-wheeler parking	-	400

- Security Outsourced and campus is provided with security 24 × 7
- 33 Security Personal

## 4.2 LIBRARY AS A LEARNING RESOURCE

### 4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes. There is a Library committee headed by the Principal, comprising of all the Heads of Departments and Student Representatives from all departments. The committee meets once in a semester to discuss the functioning of the library and improvement of library infrastructure. It plans on the purchase of books, journals and magazines.

Decisions Implemented based on Library Committee are as follows.

- Subscription to E-Books and E-Journals to access for students and Staff numbers
- 10 New Computers were purchased
- Books and General Books were purchased
- Exclusive notice board only for the library usage, reservation chart and new edition books was put up

### 4.2.2 Provide details of the following:

- Total area of the library (in Sq. Mts.) : 1338 Sq. Mts (G + 2)
- Total seating capacity: 250 numbers
- Working hours (on working days, on holidays, before examination days, during examination days, during vacation)
- Working hours
  - Working days- Monday to Friday 12 hours (8 a.m to 8 p.m.)

- Weekend-Holiday – Saturday & Sunday 6 hours (10 a.m. to 4 p.m.)
- Before examination days- 12 hours (8 a.m to 8 p.m.)
- During examination days- 12 hours (8 a.m to 8 p.m.)
- Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)
  - Ground Floor- Circulation Section, Journal Section, Photocopy section, IT zone for accessing e-resources
  - First Floor- Reference section, Book bank, Back volume, IT zone for accessing e-resources, and Stack room.
  - Second Floor- Library Office, Stack room.

**4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.**

Library Holdings	Year -1		Year - 2	
	2012-2013		2011-2012	
	Number	Total Cost	Number	Total Cost
Text Books	6279	23,08,468	8766	30,76,160
Ref. Books	77	1,92,500	678	6,78,000
Print	292	15,91,001	261	13,76,616
Software	688	19,19,183	688	16,40,151
<b>e-Res.</b> Books	366	1,15,545	366	1,02,191

Library Holdings	Year – 3		Year - 4	
	2010-2011		2009-2010	
	Number	Total Cost	Number	Total Cost
Text Books	2616	9,59,350	1610	8,82,387
Ref. Books	104	2,60,000	127	2,54,000
Print	277	14,28,484	277	12,55,133
Software	545	13,81,890	545	9,05,790
<b>e-Res.</b> Books	--	--	--	--

**4.2.4 Provide details on the ICT and other tools deployed to provide maximum access to the library collection?**

- **OPAC-** The readers can search for availability of books and Journals using the OPAC module. This service is provided for intranet use only.
- **Electronic Resource Management package for e-journals-** The following e- journals are subscribed for the period for Jan-Dec 2013.

Name of the Journal	Website Address
IEEE (ASPP) - 145 Journals Journal Access since January 2000	<a href="http://ieeexplore.ieee.org">http://ieeexplore.ieee.org</a>
Science Direct (Elsevier) 1.Engineering-275 Journals 2.Chemical-30 Journals 3.Bio Technology- 70 Journals Journal Access since January 2000	1.Engineering Journal List (or) <a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a> 2.Chemical Journal List (or) <a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a> 3.Bio Technology Journal List (or) <a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
Springer 1. Electrical , Electronics and Computer Science Engineering- 134 journals Journal Access since 1997 2.Mechanical Engineering-46 Journals Journal Access since January 2000	1.Electrical , Electronics and Computer Science Engineering Journal List (or) <a href="http://www.springerlink.com">http://www.springerlink.com</a> 2 Mechanical Engineering Journal List (or) <a href="http://www.springerlink.com">http://www.springerlink.com</a>
ASCE Journals (American Society of Civil Engg) 1. Civil- 33 Journals Journal Access since January 1983	<a href="http://ascelibrary.org/journals/all_journal_titles">http://ascelibrary.org/journals/all_journal_titles</a>
McGraw Hill- General Engineering and Reference	<a href="http://www.accessengineeringlibrary.com">http://www.accessengineeringlibrary.com</a> (or) <u>Subjectwise</u> (or) General Engineering and Reference List
ASTM Digital Library (Over 1700 E-books and 13000 Journals Articles)	<a href="http://enterprise.astm.org">http://enterprise.astm.org</a>
j-Gate	<a href="http://www.jgate.in">http://www.jgate.in</a> or <a href="http://www.j-gate.informindia.co.in">http://www.j-gate.informindia.co.in</a> Username: svcejet Password : xxxxxxxxxxxx
Nature	<a href="http://www.nature.com/nature/">http://www.nature.com/nature/</a>
Scientific American	<a href="http://www.nature.com/scientificamerican">http://www.nature.com/scientificamerican</a>
Open Access Journals	Open Access Journals

- **Federated searching tools to search articles in multiple databases**
  - Various type of search also available like Title search, Advance search, Multiple search, Catalogue search, Dictionary search., etc. Search can also be done by using title of books, author of books, subject, keywords or publisher, edition and Journals.
- **Library Website**

- Separate Library website available. The website name is “DLIB” this facility is available only for intranet services. Lot of benefit can be rendered to the User like:

1	Online Public Access Catalogue (OPAC)
2	Reprographic Service
3	Book Reservation
4	Internet Access
5	Reference Service
6	Conference Alert Service ( Staff, Student)
7	Competitive Exam Guides
8	Multimedia Service
9	Inter Library Loan Service
10	Online Book Renewal
11	Digital Library- E-Books, E-Journals, E-Lectures,

- **In-house/remote access to e-publications**
  - Different type of E-Publications are available the In-house which can be accessed by User.
- **Library automation**
  - The library is fully computerized using AutoLib Software and covering most function of library
- **Total number of computers for public access**
  - 34 computers can be access by the users from morning 8 A.M to 8 P.M
- **Total numbers of printers for public access : 03**
  - Internet band width/ speed- 12 mbps
- **Institutional Repository**
  - Lecture notes, published by faculty that can be accessed through Library website.
- **Content management system for e-learning**
  - NPTEL lessons available which can be accessed through intranet (Free Access)
- **Participation in Resource sharing networks/consortia (like Inflibnet)**
  - We have Membership with British Library and MALIBNET and we can share the resources with them.

#### 4.2.5 Provide details on the following items:

- Average number of walk-ins : 620 / day
- Average number of books issued/returned : 495 / day
- Ratio of library books to students enrolled : 19:1
- Average number of books added during last three years : 6173

- Average number of login to opac (OPAC) : 350
- Average number of login to e-resources : 125
- Average number of e-resources downloaded/printed : 110
- Number of information literacy trainings organized : Nil
- Conducting user orientation and awareness program for the first year students and new staff members every year.
- Details of “weeding out” of books and other materials - Damaged & Missing books are weeded out with approval from Principal and Management

#### **4.2.6 Give details of the specialized services provided by the library**

- **Manuscripts** : Nil
- **Reference**
  - Reference books are arranged in separate racks and can be easily located by user.
- **Reprography**
  - Color and Black &white Photocopy facility is available in the library at nominal cost
- **ILL (Inter Library Loan Service)**
  - British Library- Chennai and MALIBNET Membership through which ILL service provided
- **Information deployment and notification (Information Deployment and Notification)**
  - Library notice boards at Library entrance and First floor of Library provide information deployment and notification
- **Download**
  - Available through internet and intranet facility in the Library
- **Printing**
  - We have Three printer and also two printer attached with the Photocopy Machine
- **Reading list/ Bibliography compilation** : Yes, Available
- **In-house/remote access to e-resources**
  - In-house resources to access e-resources are provided through intranet facility.
- **User Orientation and awareness**
  - We have conduct User orientation and awareness in the first Library period of every year.
- **Assistance in searching Databases**
  - Yes, Assistance in searching Databases is provided
- **INFLIBNET/IUC facilities**
  - We have Membership with British Library and MALIBNET and we can share the resources with them.

**4.2.7 Enumerate on the support provided by the Library staff to the students and teachers of the college.**

Library staff supports in identifying the proper documents and services related to the field of users in terms of books, journals, journals-papers, back volumes, reprographic materials, searching databases of books and journals, etc.

**4.2.8 What are the special facilities offered by the library to the visually/physically challenged persons? Give details.**

Library staff offer the necessary assistance to select, borrow and return the library books for physically challenged persons.

**4.2.9 Does the library get the feedback from its users? If yes, how is it analysed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analysed and used for further improvement of the library services?)**

Suggestion Register is kept in the Ground floor of the library to get feedback from the students and staff and discussed in Library Committee Meeting and appropriate decisions are taken to satisfy the needs of users

**4.3 IT INFRASTRUCTURE**

**4.3.1 Give details on the computing facility available (hardware and software) at the institution.**

- Number of computers with Configuration (provide actual number with exact configuration of each available system) : 1182 Systems
- Computer-student ratio - 1:2
- Standalone facility: 5
- LAN facility: Yes
- WiFi facility : yes
- Licensed software -  
395 licenses for operating systems + MSDDAA subscription + Linux
- There are also a wide variety of software tools / packages. Some specialized tools are
  - ✓ Visual Studio 2005, Rational Rose, Oracle, MS SQL Server
  - ✓ Adobe Suite, Macromedia Dream Weaver, Pro E, Ideas, ANSYS
  - ✓ MATLAB, Mechanical Desktop, CATIA, MATH CAD
  - ✓ Xilinx, WD Win XP PCB Design, MAGNET
  - ✓ Star Office, Pagemaker. MS win 2000 server - Academic Edition
  - ✓ MS win XP Prof - Academic Edition
  - ✓ MS Office XP STD - Academic Edition
  - ✓ MS Visual Studio v6.0 Prof
  - ✓ Oracle 9i Database Software
  - ✓ IBM's Rational Suite Enterprise v6.0
  - ✓ MS Windows 2003 Server
  - ✓ Macromedia Director MX 2004
  - ✓ Adobe Page Maker 7.0.2

- ✓ MS Visual Studio.Net 2003 Prof
  - ✓ MS Project 2003
  - ✓ Redhat Enterprise Linux Server 5.0, Borland C++ v6.0 Prof
  - ✓ Windows 2000/ Windows XP/Windows 7/Windows 8
  - ✓ EDWIN-XP (PCB Design Software/2.5416 diagnostic software TMS Processor
  - ✓ MATHCAD/Xilinx-software/Model Sim/Micro wind
  - ✓ Lab View/MATLAB
  - ✓ IE3D- EM SIMULATION SOFTWARE/TANNER TOOLS Software
  - ✓ IE3D- EM SIMULATION SOFTWARE/ADS SOFTWARE
  - ✓ Xilinx 13.4 Latest version/OrCAD Software
  - ✓ Mentor graphics –SPICE Simulation Software / PSPICEHYPERLINK
  - ✓ Polar plot software/Bloom with DSP
  - ✓ Comscope Software- Simulation for CDMA/ DIGISOL-WLAN trainer Software
  - ✓ Fedora 10 Linux, Windows 2003 Enterprise Server.
  - ✓ Babel, DesignExpert, Sigmastat, SigmaPlot, Sarotorius PC, LAS AF,
  - ✓ PERL, RapidMiner, Java, VectorNTI, EMBOSS, PHYLIP, CLUSTALX,
  - ✓ ArgusLab, Swiss PDBViewer, Pymol, AutoDOCK.
  - ✓ PRO/ Engineer v5.0 (3years)/ AutoCAD 2013/IDEAS Master series v6.0
  - ✓ MECHANICAL DESKTOP 6.0/ M Sc ADAMS Software
  - ✓ ANSYS V12 (2,56,000 nodes)/ CATIA V5.0
  - ✓ Hi Class SW35 users Version 4
  - ✓ Learn to Speak Deluxe → River deep Interactive learning Limited
  - ✓ Pronunciation Power 1 → English computerized Learning Inc.- user 35
  - ✓ Pronunciation Power 2 → English computerized Learning Inc.- user 35
  - ✓ Face to Face → Cambridge university Press – 60 users
  - ✓ English Mastery → American Language Academy – Single User
  - ✓ Professional Presentation & Public Speaking → BVG Multimedia Training
  - ✓ Professional Presentation – Cambridge ELT
  - ✓ Telephoning in English-Cambridge University Press
  - ✓ Conversation – Elegant English Series
  - ✓ English in Mind – Level 1,2,3
  - ✓ Grammar in Use
  - ✓ Vocabulary in use - Advanced, Upper Inter, Pre-Inter, Inter
  - ✓ Movie in English
- Number of nodes/ computers with Internet facility: 1177
  - Any other – College has the policy of not using pirated software strictly

#### **4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?**

- Central computing facility is available in IT, Mechanical, CSE, ECE and CA departments. They are utilized by staff members for the following:
  - Internal / External communication by email
  - Preparation of teaching / learning materials
  - Research work

- Students use the central computing facility mainly for knowledge update, lab work and research.

**4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?**

- Wi-Fi connectivity to be established throughout various Blocks.
- To provide computer facility to every faculty member.
- To increase the bandwidth of internet facility
- To deploy e-governance throughout the institution through expansion of Information Management System.
- All class rooms to be made state of the art smart and hi-tech class rooms.
- To develop e-learning facilities utilizing the resources of the faculty.
- To develop multimedia based educational modules for the various courses.
- To procure and install industry specific software and to train students on these platforms to enable them industry ready product.
- Maintenance of computers is done by the technicians in-house.
- AMC from manufacturer is available for UPS.

**4.3.4 Provide details on the provision made in the annual budget for procurement, up-gradation, deployment and maintenance of the computers and their accessories in the institution**

Up-gradation and Maintenance Budget (Rs. in Lakhs)				
Year	2009-2010	2010-2011	2011-2012	2012-2013
Spent	172	129	227	231

**4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?**

- Power point presentations are prepared for classes and technical talks.
- Lesson plans are prepared in a standard format in the computer.
- Attendance, internal assessment and University marks are software based.
- Students' feedback is taken on-line.
- Analysis of students' feedback is generated using software.
- ISO documentation and formats are available in the intranet.
- Centralized database system is available both for staff and students.
- Faculty members are highly encouraged to use power point presentation for delivering lecture through the use of LCD projectors.
- Every department have 3 LCD projectors and 1 or 2 smart class room.
- Students are encouraged to deliver the seminars, presentations with the modern presentation aids.



- Internet access to all faculty and students help them to access material available in other universities and make use of the same for study and lecture delivery.
- Students are allowed to make use of power points for their study

#### **INTERNET FACILITIES**

- Fibre optic and wireless link.
- Internet and intranet facility for all departments
- 24 × 7 internet facility
- Internet through BSNL – 12 Mbps
- Internet through VSNL – RF 256 kbps
- Exclusive email facility - <userid>@svce.ac.in
- The website is <http://www.svce.ac.in>. It is updated every day for college related information. News of the month of various departments are updated once in a month. Other sites are updated as and when events occur.
- Has separate servers for mail, DNS and Web and IMS Data Base for Student Attendance, Marks and Staff payroll.

**4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching - learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.**

- every department has one or two smart class rooms
- each room can accommodate 70+ students
- equipped with latest hardware and software tools
- connected to internet and intranet
- access to on-line teaching
- access to learning resources
- access to independent learning
- ICT enabled class room
- Peer learning groups are encouraged
- e-materials are uploaded in the intranet
- Mini projects are given to students to make them understand the concepts of theory in an effective manner.

**4.3.7 Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?**

**NO**

#### **4.4 MAINTENANCE OF CAMPUS FACILITIES**

**4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the**

**following facilities (substantiate your statements by providing details of budget allocated during last four years)?**

Amount Spent (Rs. in Lakhs)				
Year	2009-10	2010-11	2011-12	2012-13
<b>Land</b>	..	..	..	--
<b>Buildings</b>	278	306	721	1065
<b>Furniture</b>	43	16	64	45
<b>Equipment</b>	113	101	104	93
<b>Computers</b>	421	51	47	128
<b>Vehicles</b>	-	-	30	32
<b>Others</b>	-	-	-	-

**4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?**

Each department is asked to give an annual budget estimate to upgrade and to maintain the existing facilities available in the laboratories and workshop and also to buy new equipments, The budget is monitored periodically by Board of Trustees and HODs in the review meetings conducted weekly. Funds are allotted so as to ensure optimum utilization.

**4.3.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/instruments?**

Electrical and Mechanical equipments are taken up for calibration and precision measurement as and when required which will be decided by the respective departments.

The diagnostic equipments are calibrated periodically (once in a year) for precise measurement.

Calibration faults detected in between are repaired immediately.

**4.3.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?**

The college have got high powered 3 Gensets - 250 kVA, 380 kVA and 500 kVA for taking care of frequent power failures.

Any other relevant information regarding Infrastructure and Learning Resources which the college would like to include.

**Innovations/best practices in ‘Infrastructure and Learning Resources’ are in vogue or adopted/adapted by the institution?**

The following are the best practices that are in vogue:

- Excellent infrastructural facilities are provided for teaching theory and laboratory courses, seminars, sports and hostels.
- Liberal financing is provided for maintenance of facilities and creating new facilities
- Central library is working for 6 days a week between 8 AM and 8 PM.
- All the library operations are computerized using Auto Lib Software.
- Availability of OPAC, digital library, e-journals access, photocopy / internet facilities, adequate reference, large reading hall, newspaper, magazines.
- Text books are available one for every seven students. The library facility is fully automated and the library has borrowing facility with other libraries.
- Adequate provision is made in the budget for purchase of books and journals.
- The infrastructural facilities are maintained by AMCs and in-house technicians.
- Internet and intranet facilities are available through the college website and email facility is available through college server for teaching & non-teaching staff and students.
- Sports and games are well supported with many indoor and outdoor games. There is a running track, cricket pitch, tennis, basket ball, badminton and volley ball courts, swimming pool and gym.
- Hostel administration is decentralized.
- Language laboratory is provided.
- Placement and Entrepreneur Development Cells are functioning well.
- Clean maintenance of campus.

#### **CRITERION V: STUDENT SUPPORT AND PROGRESSION**

The college is established in the year 1984, and it is one of the pioneer institutes in the state of Tamilnadu as far as the student progress is concerned. The college focuses its resources to help students in their personal development and in building self-confidence to manage their own problems and excel in their career.

#### **Socio-economic profile (General, SC/ST, OBC etc.,) of the students of the last four batches.**

Year	Government Quota					Management Quota				Total
	General	SC/ST	OBC	Differently Abled	Sports	Telugu Minorities	NR I	Foreigners	General	

						y				
2009-UG	63	72	230	1	0	199	1	0	187	753
2010-UG	61	71	224	1	0	222	2	0	253	834
2011-UG	64	70	225	3	0	218	3	0	247	830
2012-UG	69	87	300	3	0	287	1	0	248	995
2009-PG	10	13	53	0	0	2	0	0	45	123
2010-PG	10	12	53	0	0	0	0	0	83	158
2011-PG	17	21	82	0	0	2	0	0	67	189
2012-PG	12	22	98	0	0	0	0	0	80	212
<b>Total</b>	<b>306</b>	<b>368</b>	<b>1265</b>	<b>8</b>	<b>0</b>	<b>930</b>	<b>7</b>	<b>0</b>	<b>1210</b>	<b>4094</b>

## 5.1 STUDENT MENTORING AND SUPPORT

### 5.1.1 Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

The institution publishes the student handbook annually. The students could find lot of information in the handbook. The academic schedule from June to May of the academic year is clearly mentioned including the continuous Assessment Test dates, parent-teacher meeting and schedule for conducting symposia of various departments are included. The students also could find various co curricular and extracurricular activities in the institution along with the staff in charge for those activities.

Information regarding various scholarships offered, apart from the government scholarships, in the institution are provided in the handbook to make the students aware of norms and eligibility criteria for those scholarships.

The students also find about the in charges of various sub committees to express about their difficulties that they are facing in the teaching learning process.

### 5.1.2 Specify the type, number and amount of institutional scholarships / freships given to the students during the last four years and whether the financial aid was available and disbursed on time?

The institute offers two schemes of scholarships apart from the government scholarships.

#### Scholarship Scheme I

Dr.A.C. Muthiah, Chairman, Governing Council initiated a new scheme from academic year 2003-2004 to distribute 5% of tuition fees income to students as:-

1. Full semester Tuition Fees Scholarship
2. Prizes for First Rankers in Internal Assessment Tests

### 1. Full semester Tuition fees Scholarship

Students will be given full semester fees as scholarship on the basis of:

- Meritorious academic performance
- Merit cum Means and
- Economic Means and
- Performance in Sports and NCC activities

### 2. Prizes for First Rankers in Internal Assessment Tests

Prizes will be given to the first rank holder in Continuous Assessment Tests (CAT) of each class in every semester.

### Scholarship Scheme II

The College has Rs. 62 lakhs as Scholarship Fund as on 31st March 2012. The interest accruing on the fund is utilized for giving assistance for purchasing books & instruments and awarding medals & prizes.

#### 1. Assistance for books and instruments

The grant for books and instruments to the students are distributed annually on the basis of:

- Meritorious academic performance
- Merit cum Means
- Economic Means and
- Performance in Sports and NCC activities

#### 2. Scholarship to Marine Engineering Student

Scholarship of Rs.40, 000 to an outstanding student of the Final year of Marine Engineering course based on his performance in final year is being given by **Vasant J. Sheth Memorial Foundation, Mumbai.**

#### 3. Cognizant Foundation Scholarship

Cognizant Foundation a unit of Cognizant Technology Solutions awards Scholarship of Rs. 35000 to four students from Computer Science and Engineering and Information Technology.

### MANAGEMENT SCHOLARSHIP (Amount in Rupees)

CATEGORY OF SCHOLARSHIP		2009-10		2010-11		2011-12		2012-13	
		ODD	EVEN	ODD	EVEN	ODD	EVEN	ODD	EVEN
ECONOMIC MEANS	No of Student	56	19	43	14	35	34	59	37
	Amount in lakhs	24.25	8.075	17.975	4.21	13.63	8.22	20.25	16.375
MERIT CUM MEANS	No of Student	30	26	30	23	26	27	34	26
	Amount in lakhs	6.22	5.35	5.98	4.06	4.56	4.32	6.49	5.123

MERIT	No of Student	35	33	37	36	37	38	40	39
	Amount in lakhs	7.27	6.88	7.25	6.85	8.01	7.37	7.92	7.685
NCC	No of Student	3	3	3	3	3	3	3	3
	Amount in lakhs	0.76	0.675	0.712	0.575	0.60	0.512	0.6561	0.6
SPORTS	No of Students	10	10	10	10	10	10	10	10
	Amount in lakhs	2.30	2.30	2.30	2.412	2.63	2.75	2.63	3.012
BOOKS & INSTRUMENT GRANTS	No of Student	75	NA	104	NA	67	NA	76	22
	Amount in lakhs	2.25		3.12		2.01		2.28	0.66

### **GOVERNMENT SCHOLARSHIP**

#### **BC/MBC Scholarship (State Government)**

<b>Academic Year</b>							
<b>2009-2010</b>		<b>2010-2011</b>		<b>2011-2012</b>		<b>2012-2013</b>	
<b>Total Number of Students</b>							
<b>3479</b>		<b>3681</b>		<b>3883</b>		<b>4211</b>	
No. of Students	Total amount in lakhs	No. of Students	Total amount in lakhs	No. of Students	Total amount in lakhs	No. of Students	Total amount in lakhs
164	4.19	213	5.32	233	5.87	295	7.34

#### **SC/ST Scholarship (Government of India)**

<b>Academic Year</b>							
<b>2009-2010</b>		<b>2010-2011</b>		<b>2011-2012</b>		<b>2012-2013</b>	
No. of Student	Total amount in lakhs	No. of Students	Total amount in lakhs	No. of Students	Total amount in lakhs	No. of Students	Total amount in lakhs
70	3.84	86	9.58	97	11.02	116	7.61

The students are informed about the school arships available in the institution through the class advisors and the application forms are circulated to them. The students applied for the scholarships are first screened in the department level for various schemes. Then the students would be interviewed at the college level to find the deserved candidate to receive the scholarships. The Dean (Student welfare) ensures that the above said amounts are disbursed in time to the students

### 5.1.3 What percentage of students receive financial assistance from state government, central government and other national agencies?

The institute has facilitated the students to receive state and central Governments and also from **M/S Vasant J. Sheth Memorial Foundation, Mumbai** for the marine engineering students.

Year	State Government		Central Government		Total No of Students
	Number	%	Number	%	
2009-2010	164	5	70	2	3479
2010-2011	213	6	86	2	3681
2011-2012	233	6	97	2	3883
2012-2013	295	7	116	3	4211

#### For Marine Engineering Students

Year	Vasant J. Sheth Memorial Foundation, Mumbai		Total Number of Students
	Number	%	
2009-2010	3	3.33	90
2010-2011	3	3.33	90
2011-2012	3	3.33	90
2012-2013	3	3.33	90

### 5.1.4 The specific support (or) services/facilities available for

✓ *Students from SC/ST, OBC and economically weaker sections*

The institute arranges for the students from the economically weaker sections to get the government scholarships and the institute also provide the economic means scholarship to those who are not in a position to pay the college fees.

✓ *Students with physical disabilities*

The college allocates those classes, in which physically disabled students are studying, in the ground floor of a class room buildings. Ramps are provided for the students to move freely wherever possible. They are allowed to use three wheeled motor cycle inside the campus to go for laboratory, library, department blocks, hostel etc. The stool height is adjusted so that it would be easy for them to perform experiments on test bench in laboratories. They are also allowed to sit in first row of the class room to have a clear view of the board.

✓ *Students to participate in various competitions/National and International*

Sponsorship offered to the students for participating international

conferences/workshops. A panel comprising HOD/experienced professors across the department will observe the standard of the technical paper worked by the students and give the report to sponsor/not to sponsor their participation with sponsorship amount. Students were given sufficient On Duties (OD) if the students are selected for participation in National level workshop/symposium organized by reputed institutions.

✓ *Medical assistance to students: health centre, health insurance etc.*

The college has fully equipped health centre with ECG Machine, Oxygen cylinder, Nebulizer facility and Blood Investigation Laboratory. The medical centre has six beds to take care of the students. The main objective of this health centre is to provide first aid care for General illness and Injuries. One Medical officer available during college working hours and one Nurse available 24 hours in the campus

One ambulance with respiratory care and first aid medicines is available in the campus for 24 hours. Our students are covered under the personal Accident Policy of value Rs. 1, 00,000 for each student, taken with 24 hours X 7 days coverage.

✓ *Organizing coaching classes for competitive exams*

The students of this department are motivated and helped by faculty members to appear for the TOEFL, GRE, CAT exams and helped to identify the programmes and institutions where they can apply for a higher education. Even though the coaching classes for competitive exams are not explicitly conducted, the various forms of coaching like communication skills, online materials, multimedia based learning, and solved question bank with keys etc. are provided by the faculty. Question bank for GRE, TOFEL, GATE, GRE and CAT are also maintained in the library.

✓ *Skill development (spoken English, computer literacy, etc.*

The language laboratory in the Humanities & Social Sciences department helps to improve the communication skills of students. The students are encouraged to give seminars to improve their communication and public speaking skills. The department of Biotechnology is provided with 27 computers for the students to improve their computer skills with the help of faculty members.

Skill development is imparted to the students through Training and placement cell as well as Language department. Many activities like soft skills, communication skills, guidelines to access online materials, multimedia based learning, etc are carried out for the sake of students.

Language Lab	Space Students	Type of experiments	Quality of instruments
--------------	----------------	---------------------	------------------------



Communication Lab 1.Career Lab 2.Language Lab	212 Sq/m 35 in Career Lab 35 in Language Lab 70 per session / 2 Batch / 35 students per Batch	Presentation on technical and non technical topics, group discussions, listening and reading comprehensions, error detection, arranging jumbled sentences for coherence.	Computers based learning, language learning software are used practice tests/instructions based on individuals proficiency.
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✓ **Support for “slow learners”**

Slow learners are found out from the analysis of various assessment process such as weekly test, Cont. Assessment Test, Lab Viva session, interaction during the lecture delivery, etc. These students are asked to discuss with the faculty in person during the extra hours such as Library/seminar hour/evening stay back/Saturday in addition to the special classes conducted for those students. Slow learners are also asked to take up the retests for the respective subjects. They are also given special attention by solving the important problems in the form of additional worksheets and assignments.

✓ **Exposures of students to other institution of higher learning/corporate/business house etc.**

The students are encouraged to do their final year project in the industries located in and around Chennai. Around 50% of the project groups are doing their project in the industries. The students are also exposed to the current trends in the industry by arranging guest lecture from the reputed institution and industries. The students are also encouraged to take up the in plant training in the industry to get the hands on experience about the current technology in the industries. The institute arranges for industrial visits to the students to get first hand information about the industries and their technologies.

✓ **Publication of student magazines**

Phoenix- A college level student magazine is published involving students of all branches. Faculty In-charge from the Department of Humanities and Social Sciences (HSS) acts as Staff Advisor for the students magazines. The department of HSS as well as student’s department encourages all its students to publish their literary and technical articles in the form of magazines. Headed by a Faculty Editor, students write, select, edit articles, on general and specific issues. The purpose of the magazine is to facilitate students to express their thoughts and ideas freely and also to develop and hone their other skills as all activities are managed by the student editors.

**5.1.5 Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.**

The Entrepreneurship Development Cell (EDC) has been in existence in this

institute since 1996. The EDC-SVCE has organized a number of awareness camps during the last 15 years at regular intervals for the benefit of our students and motivates them to become entrepreneurs.

A Full fledged Entrepreneurship Development Cell (EDC) was established in the college in February 2003 under the sponsorship and funding support from National Science and technology Entrepreneurship Development Board (NSTEDB) Division, Department of science and Technology(DST), Government of India, New Delhi.

The main objective of the cell is to motivate and train students, so that students become job creators rather than job seeker. The cell organizes at regular intervals Entrepreneurship awareness camp, Entrepreneurship development programs and skill development programs. After the sanction was made by DST, the cell organized four Entrepreneurship awareness camps, a 5 day workshop on document preparation using LaTeX.

The various activities with respect to the entrepreneurship development cell are listed in the Appendix V-A

#### **5.1.6 Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co-curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc.**

Students with the interest on sports are studied. One sport hour is officially allotted in the timetable itself besides the practice hours beyond the working hours. Head of the Department gives reasonable freedom to the director-Physical Education to encourage their students to participate in various levels of competitions such as (Inter/Intra) Zonal /state/national level.

Faculty advisor will give limited on duties (OD) to those students and if necessary, special OD will be sanctioned by Head of the Department.

Students are allowed to participate in various technical symposiums/ Quiz competitions by providing them on duties to develop their competition skills. The department faculty and students representatives will find out the students having interest on cultural activities and they are made to participate in the college day function/other college (with restrictions). The students irrespective of events such as sports/cultural activities are allowed to have unique dresses/uniforms with the approval from the management. Sports related materials/support (physical/mental) to the students is provided by the Physical education.

Extra classes/ special classes will be conducted for those students who tend to miss their regular academic classes owing to extracurricular and co-curricular activities either on a collective basis (or) vis-à-vis basis by the dedicated faculty members. Retests are conducted to the students who are on OD for co/extra curricular activities.

Some of the achievements in the extracurricular / Co-curricular activities are given in the Appendix V-B

**5.1.7 Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIRNET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central /State services, Defense, Civil Services, etc.**

Various forms of coaching like communication skills, online materials, multimedia based learning, and solved question bank with keys etc. are provided by the faculty. Question bank for GRE, TOFEL, GATE and CAT are also maintained in the library. The students who opted for higher studies and not opting for campus placement are undergoing in a different competitive exams in general such CAT / GRE / TOFEL / GMAT / Central /State services, Defense, Civil Services, etc. The numbers of those students falling under any of the above competitive exams are given as follows:

Year	Number of students qualified				
	GATE	GRE	TOFEL	IELTS	CAT/GMAT
2009-2010	7	44	23	5	3
2010-2011	8	63	33	21	3
2011-2012	7	55	32	8	11
2012-2013	19	23	21	7	2

**5.1.8 What type of counseling services are made available to the students( academic, personal, career, psycho-social etc.)**

**Academic**

For every 22 students one faculty member is assigned to function the role of faculty advisor (or) counselor whose primary activity is to monitor the academic progress of the students under their care and to take corrective measures for any aberration in their progress in academic pursuits. In the role of faculty advisors, faculty members act as academic messengers too.

**Personal**

The faculty advisors also wield the role of personal counselor in whom a student can confide their personal problems for which the faculty advisor strive to arrive at an optimal/amicable solution through the counseling along with their HOD.

**Career**

College Chief Placement officer plays an exemplary role in this regard. Besides his regular role as placement liaison officer, he frequently visits each and every class to motivate and counsel students in the career aspect. He

explains in detail in clear but in lucid language the career prospects, preparation and career development activities. The necessary training programs in soft and other skills development have been arranged under the aegis of Placement Cell which includes experts from industry as trainers.

#### **Training on Counseling**

S. No.	Date	Activity
1	30/01/2010	Awareness programme for faculty members on Guidance and Counseling for students conducted by Dr. B.G. Barki, Professor & Head, Department of Education, NITTTR and Dr. B. Mukhopadhyay, Professor & Head, Department of Educational Management and Applied Psychology, NITTTR.
2	04/10/2010	Mr. Sounak Chakrabarty, Sahaj Path Trainer conducted a “Life Skill Orientation Program for II year Marine Engineering students to improve their life skills in the institution and in the Ship particularly.
3	08/10/2010	A film show followed by a talk on “Awareness Programme against menace of drugs” organized.
4	21/10/2010	As per the direction of UGC, to curb ragging and help the fresh students to integrate into college studies, a one day programme was organized to counsel all the first year students by Dr. Ramkumar Ganesan, Expert in Student Counselling, a Professional Counsellor.
5	1/8/2012 to 3/8/2012	Orientation programme by Prof. M. Sivanandham for first year students of 2012-2013 batch.
6	1/8/2012 to 3/8/2012	Orientation programme by Prof. K. Balu for first year students of 2012-2013 batch.

**5.1.9 Does the institution have a structured mechanism for career guidance and placement of its students? If ‘yes’, detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).**

Training and Placement cell plays a very active role in getting our students placed in various leading multinational and Indian companies. The Training and Placement activities are looked after by a senior who is assisted by placement coordinators and two student representatives from each discipline. The placement committee meets regularly, takes decisions, interacts with various companies and organizes campus interviews.

The Training and Placement Cell provides materials for entrance examinations like GATE, GRE, TOFEL through main Library, department Library, HSS Department and others. The HSS department conducts programs for personality development, communication skills and group discussions.

Sl.No	Dept (UG)	ACADEMIC YEAR											
		2009-2010			2010-2011			2011-2012			2012-2013		
		@	#	%	@	#	%	@	#	%	@	#	%
1	AE	20	2	10	20	8	40	22	21	95	32	30	94
2	BT	24	15	63	22	17	77	32	30	94	26	25	96
3	CH	35	21	60	50	47	94	55	52	95	48	45	94
4	CE	--	--	--	--	--	--	20	16	80	18	12	67
5	CS	95	73	77	110	107	97	118	115	97	104	97	93
6	EC	85	78	92	120	116	97	108	103	95	98	91	93
7	EE	90	76	84	114	113	99	115	114	99	105	104	99
8	IT	80	67	84	115	113	98	95	94	99	97	96	99
9	ME	60	56	93	98	96	98	90	88	98	70	68	97
10	MR	24	15	63	22	20	91	23	15	65	30	13	43

@- Total Number of students # -Number of students Placed

Sl. No	Depts (PG)	ACADEMIC YEAR											
		2009-2010			2010-2011			2011-2012			2012-2013		
		@	#	%	@	#	%	@	#	%	@	#	%
11	CA	30	24	80	37	36	97	40	39	98	30	26	87
12	ME(PED)	10	0	0	10	8	80	20	19	95	12	6	50
13	ME(CS)	10	3	30	15	15	100	12	11	92	12	3	25
14	ME (Comm System)	10	5	50	12	10	83	20	18	90	10	7	70
15	ME (CAD)	6	0	0	6	5	83	12	9	75	6	2	33
16	M.Tech (BT)	--	--	--	--	--	--	--	--	--	5	3	60
17	ME (Computer and Communication)	--	--	--	--	--	--	--	--	--	8	2	25

@ -Total Number of students # -Number of students Placed

The Training and Placement Cell also arranges for vocational in plant training to interested students in various companies during their summer and winter vacation. TPC also conducted the mock placement interview by the real Human resource managers of the various companies who are going to visit the institution in a 6 months' time for the regular placement.

The list of various companies visited our campus to recruit the students are mentioned in the Appendix V-C

**5.1.10 Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.**

**Grievance Redressal Committee** is constituted with the senior professors and an advocate. The Dean Students(welfare) is the convener. For the academic year 2012-2013, **Complaints Cum Redressal Committee for women** is

headed by Dr.M.Jayamala, Dean Examination as Chair person with senior professors as members.

No grievance incident is reported for the present academic year.

**5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?**

**A complaint cum Redressal Committee for women is** constituted in the institute and is headed by Dr.M.Jayamala, Dean Examination as Chair person. If any of the girl student or lady faculty faces a problem related to sexual harassment, they can report to the above committee. We have not received any such complaint for the past four years.

**5.1.12 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?**

For the academic year 2012-2013, Anti Ragging committee headed by Dean Students' Welfare as Chairman and Vice Principal and Warden as Vice Chairman and some senior professor as members.

Anti ragging information leaflets are distributed to all first year students on their first day in the college. Anti ragging measures are taken in the college campus, hostels and college buses. Details of anti ragging committee including college members, external official members, parent members of senior and first year students, and student representative is communicated to the Registrar, Anna University.

**No ragging incident is reported for the present academic year.**

Details of the various committee members are listed in the academic calendar.

**5.1.13 Enumerate the welfare schemes made available to students by the institution.**

For the academic year 2012-2013, Discipline and welfare committee is headed by Prof.S.Krishnan, (Dean Academics) as Chairman and six Heads of Departments as members.College has lot of schemes for the students welfare.

1. Scholarship Schemes
2. Sponsorship scheme to present the technical paper in National/ International conferences held in India and abroad
3. Insurance Scheme: The students are covered under the personal Accident Policy of value Rs. 1 lakh for each student, taken with 24 hours X 7 days coverage.
4. The institute executes MOUs with leading industries in the vicinity of the Chennai for enabling the students to get the opportunity to do their project with the real time problem of the industry.

**5.1.14 Does the institution have a registered Alumni Association? If ‘yes’, what are its activities and major contributions for institutional, academic and infrastructure development?**

Yes. The institution has an Alumni Association. Its activities and major contributions for institutional, academic and infrastructure development.

- a) Scholarship for needy students
- b) Friends of SVCE forum to help in all aspects
- c) News letter through email
- d) Budding Bright Engineers Award
- e) Best Teacher Award

**5.2 STUDENT PROGRESSION**

**5.2.1 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the trends observed.**

Student progression	%				Department
	2009-2010	2010-2011	2011-2012	2012-2013	
UG to PG	19.35	25	2.86	--	AE
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	1	7	13	31	
Other than campus recruitment	1	1	1	1	
UG to PG	44	38	40	--	
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	6	5	-	-	
Employed Campus selection	83	73	87	67	
Other than campus recruitment	2	6	2	-	
UG to PG	--	--	23	--	CE
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	--	--	23	24	
Other than campus recruitment	--	--	20	--	
UG to PG	--	26.67	27.27	4.44	
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	--	45	51.52	32.22	

Other than campus recruitment	--	28.33	18.18	--	
UG to PG	15	14	12	11	<b>CS</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	83.69	78.8	98.95	98.18	
Other than campus recruitment	--	--	--	--	
UG to PG	23.1	25.9	25.62	19.28	<b>EC</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	64.65	91.22	100	78.76	
Other than campus recruitment	--	--	--	--	

<b>Student progression</b>	<b>%</b>				<b>Department</b>
<b>Year</b>	<b>2009-2010</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	
UG to PG	15.9	20.14	8.5	--	<b>EE</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	54.54	70.15	74.46	--	
Other than campus recruitment	29.55	9.7	17.02	--	
UG to PG	--	--	--	--	<b>IT</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	51.96	76.51	74.21	65.54	
Other than campus recruitment	27.55	7.5	1.5	--	
UG to PG	12	14	13	--	<b>ME</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	3	2	1	--	
Employed Campus selection	41.27	68.57	88.89	67.14	
Other than campus recruitment					
UG to PG	--	--	--	--	<b>MR</b>
PG to M.Phil.	--	--	--	--	
PG to Ph.D.	--	--	--	--	
Employed Campus selection	62.5	90.9	65.2	43.33	



Other than campus recruitment	--	--	--	--	
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In our institute considerable amount of students are going abroad for their higher studies. The placement in the college is also more than 60 % for almost all the departments. The percentage of students placed is not largely affected by the world economic scenario.

**5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (cohort wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district. U.G- PASS PERCENTAGE 2009-2012**

BRANCH	2009	2010	2011	2012
AE	79	77	59.38	71.4
BT	98	90	87.79	100
CE			54.74	77.4
CH	98	97	84.91	91
CE	86	89	67.45	80
EC	84	90	74.27	90.44
EE	91	92	74.9	83
IT	88	88	65.66	75.2
MR	77	96	85.44	91.3
ME	91	88	72.8	85.71
overall pass %	<b>88.00</b>	<b>89.67</b>	<b>72.73</b>	<b>84.55</b>

The comparison of programme wise performance with for last four years is discussed in the criterion II.

**5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?**

By conducting seminars from various prestigious abroad universities /soft skills training programs at regular intervals. The interested students are guided on how to perform well in the competitive exams like GATE, Civil service exams etc. Special seminars had been arranged to know the current global challenges. The students are encouraged to go for the implant trainings. Conducting coaching/training classes to hone the employability skills of the students. Guest Lectures were conducted on the higher education opportunity in India and abroad by various external personalities from India and abroad.

**5.2.4 Enumerate the special support provided to students who are at risk of failure and drop out?**

Students who are at the risk of failure and drop out will be identified by the faculty advisors and provided special attention and counseling, special classes as a support for the student to learn more. Extensive counseling will be done by the faculty advisor concerned and also by external counselor. Parent of the students are also invited to the college to have positive discussion on their ward among the HOD (student), senior professors, faculty advisor concerned, the student to get the practical solutions to continue his studies in such a way the student to do well for his carrier. All the faculty to these students will show extra care on improving their studies.

**5.3 STUDENT PARTICIPATION AND ACTIVITIES**

**5.3.1 List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar. &**

**5.3.2 Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.**

The college encourages the students to take part in both co-curricular and extracurricular activities. The students are allowed to take part in various sports games, cultural and other extracurricular activities. The list of those activities along with the achievements of the students is listed in the Appendix V-B.

**5.3.3 How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional Provisions?**

The institution collects an exit feedback from its passing out students. The students are requested to fill the exit feedback form before they receive their Transfer Certificate (TC). The data is collected and processed. The data is used to implement any corrective or preventive action to rectify any deficiencies.

The Training and placement cell collects feedback from senior executives, who visit the campus for campus interviews, on the performance of the students in the campus interviews. This feedback is just passed on to the department to make the necessary action.

Feedback from Alumni is also collected from time to time. This data is used to update the teaching and learning process, particularly to implement any tailor made course for the students to improve the change to bet placed.

**5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other**

**material? List the publications/ materials brought out by the students during the previous four academic sessions.**

The College management encourages all its students to publish their articles in the magazines/e-magazines. For the technical student symposia conducted once in every academic year, by each Department, the posters and brochures are designed exclusively by the students. The students are participated in ‘Student Journalism’ and the students act as Editors. A Faculty from the Department of Humanities and Social Sciences acts as its Staff Advisor.

The faculty members guide and mentor the students to carry out novel projects, coordinate with teachers in organizing and publishing magazines, and participate in various international and national conferences where they are encouraged to present/publish paper’s and posters.

The college encourages associations which are contributing to the professional growth. We have different departmental associations for their exposure to the current update in engineering community (with respect to technical publications, innovations etc.,) in India. Students publish their technical ideas in the form of journal papers and working models. Students are encouraged to present their papers in national and international conferences by sponsoring them to participate in those forums. The posters and brochures are designed exclusively by the students for the technical symposium (PANSOPHY) conducted once in a year by the department.

Details of the student’s publication are given in the Appendix V-D

**5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.**

Every year, students elect their class representatives and from the elected class representatives, office bearers of students association are selected. Office bearers for the academic year 2012-2013 are as follows

President	: Mr. Venkatesh Subramanian, IV year, AE
General Secretary	: Miss. Roshini Natarajan, III year, EC-B
Joint Secretary	: Miss.R.Abinaya, III year, CH-A
Sports Secretary	: Mr. Sashank Ramesh, III year, EE-B
Treasurer	: Mr.S.Karthick Shanmugam, II year, EE-A
Post Graduate Representative	: Mr.A.Arun Kishore, II year, ME,CS.

Dean Students’ Welfare is a mentor for students association. Office bearers of the association express opinions and suggestions without any fear for the betterment of the institution. Adequate funds are provided by the management for the activities of students association.

**Academic and administrative bodies** that have student representatives on them are given below

- Class Committees
- Library Committee
- Sports Committee
- Transport Committee
- Training & Placement Cell
- Canteen Committee
- Institute Industry interaction cell

- Entrepreneurship development cell

### **5.3.6 Give details of various academic and administrative bodies that have student representatives on them.**

The College has various academic and administrative bodies that have student representatives on them. This representation helps them for their overall development. These bodies create more avenues for students to develop technical skill, updating knowledge on the state of the art subjects, personality development and service to society through the following Societies/Associations. There are staff advisers to guide students in the smooth and efficient conduct of these activities.

- Society of Mechanical Engineering (SME)
- Association of Computer Engineers (ACE)
- Electronics and Communication Engineers Association (ECEA)
- Association of Electrical and Electronics Engineers (AEEE)
- Association of Chemical Technologies (ACT)
- Association of Information Technologists(AIT)
- Association of Marine Engineers(AME)
- Association of Automobile Engineers (AAE)
- Association of Biotechnologists
- MCA Students' Association
- Mathematics Forum
- Forum for Economic Studies for Engineers(FORESE)
- Society of Automotive Engineers (SAE)
- Indian Institute of Chemical Engineers (IChE) – Students Chapter
- Institution of Electrical and Electronic Engineers (IEEE)
- Indian Society for Technical Education (ISTE)- Student Chapter
- Indian Society for Training and Development (ISTD)- Student Chapter
- ACM- Student Chapter
- National Cadet Corps (NCC – Army Wing)
- National Cadet Corps (NCC- Air wing)
- National Cadet Corps (NCC- Naval Wing)
- National Service Scheme (NSS)
- Youth Red Club(YRC)
- Leo Club
- Rotaract Club
- Society for Promotion of classical Music and Dance
- Tamil Mandram
- Speakers' Forum
- Student Journalism- Phoenix- College magazine
- Industry Institute Interaction Cell
- CARE (Eco Club)

### **5.3.7 How does the institution network and collaborate with the Alumni and former faculty of the Institution.**

The institution has an Alumni Association. It involves in various activities and major contributions for institutional, academic and infrastructure development. The various activities in which the alumni association involved are as follows.

- a) Scholarship for needy students
- b) Friends of SVCE forum to help in all aspects
- c) News letter through email
- d) Budding Bright Engineers Award
- e) Best Teacher Award

The institution establishes a network among the alumni members and the institution by the following ways.

- a) Conducting AGM on 15<sup>th</sup> August at the College
- b) Informal get-together on 26<sup>th</sup> January in Chennai
- c) Guest lecture by Alumni and former faculty
- d) Awarding best Alumni of the year.

On behalf of association, promoting EDC activities a Panel Discussion was organized. This helped the alumni who are eager to setup business units. It also mentors the students to meet the industry need. The association also constitutes an award for the young engineers as Budding Bright Engineers Award.

## **CRITERION VI : GOVERNANCE, LEADERSHIP & MANAGEMENT**

### **6.1 INSTITUTIONAL VISION AND LEADERSHIP**

#### **6.1.1 State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?**

The vision and mission are stated in 1.1.1

#### **6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?**

Quality Policy: To impart quality education in Science, Engineering and Technology, nurturing right attitudes towards scholarship, research and entrepreneurship, enabling students to meet the challenges of industry, society and environment.

The top management takes utmost care in providing excellent infrastructure facilities and conducive learning environment to the faculty and students. The leadership in SVCE is such that it motivates all its employees to contribute their best by providing a harmonious working culture. This harmonization is made possible only if education system takes stock of its own activities. Hence to monitor the performance of the various activities of the institution, SVCE follows the quality management system (ISO 9001 : 2008). Design and execution of quality policy and plans are substantiated with the following.

- QMS has various process measures for each and every activity of the department and the college as well. It substantiates the execution of all the plans.
- The placement cell takes care of developing professional competence and soft skills in every student
- It invites trainers from various organizations to impart the necessary skills needed as per the industry requirement
- SVCE has a separate office for research, headed by a Director. This encourages and provides the necessary facilities to carry out research activities at various levels
- To promote the institute-industry interaction, SVCE has an overall industry objective leader and various department coordinators. They actively engage in activities for signing MOUs with industries and institutions

### **6.1.3 What is the involvement of the leadership in ensuring:**

- ***the policy statements and action plans for fulfillment of the stated mission***

Management takes responsibility to provide the facilities for learning and growth of the college by providing budget under various heads for improving its infrastructure. It provides various scholarship schemes, promotes research activities and encourages entrepreneurship by invited lectures so that the students are competent enough to meet the needs of industry.

- ***formulation of action plans for all operations and incorporation of the same into the institutional strategic plan***

Based on the policy statements, the management strictly follows QMS ISO 9001:2008 to accomplish the strategic plans. This provides various templates (Process measures) for the various activities, so that the operations are recorded chronologically. These process measures are audited every six months.

- ***Interaction with stakeholders***

SVCE frequently creates various platforms for interacting with its stakeholders.

- Every six months it calls for parents' meet to keep them posted with the information regarding their wards. In turn, their feedbacks are also taken for taking necessary corrective action if required
- Student counseling is conducted every month to identify their problems and they are resolved appropriately
- Another category of stakeholders are employers, wherein all the communications in all aspects are taken care by placement cell
- The institution has strong alumni associations and meetings are being held twice a year Jan 26<sup>th</sup> and Aug 15<sup>th</sup> of every year

- ***Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders***

The various Heads of the Departments and the Deans, review the progress for continuous improvement. Based on the employers feedback about the students placed in the preceding years, the students are given additional training in the areas for improvement as suggested by the business community. For acquiring research projects and consultancy work, facilities are enhanced as required. In order to improve the performance of the students, internal assessment methodology is frequently reviewed and modifications are implemented.

- ***Reinforcing the culture of excellence***

SVCE always benchmarks itself against the best industry practices. It channelizes the procedures and practices with respect to the prevailing external environment and hence proves to create an atmosphere as Center for Excellence.

- ***Champion organizational change***

SVCE follows a structured approach for ensuring that changes are smoothly and successfully implemented, and that the lasting benefits of change are achieved. In order to accomplish this, SVCE aligns stakeholders' expectations, communicates, and integrates employees' efforts for the growth of the institution. It makes use of performance metrics in terms of pass percentage, placement percentage, presentation in conferences, journal publication, accepted proposals, consultancy work etc to design appropriate strategies. These are communicated to the employees so that they execute and accomplish the requirement as per the strategies set.

#### **6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?**

- Teaching learning process is being monitored by number of theory classes and practical sessions conducted by the faculty
- Students' attendance and internal marks are recorded. Corrective actions are taken whenever required by informing the parents, conducting retest, special classes etc
- Research contributions of the students and faculty are recorded and monitored. Faculty and students are sponsored and sent for presentations in national and international conferences, FDPs, workshops, seminars etc. Incentives are provided to the faculty publishing in national and international journals.
- Faculty and students are sponsored and sent for training programmes in industries. Students are sent for internships, implant training and industrial visits to other organizations. These are also recorded and improvised year after year

- Students are encouraged to take up projects in industry during their last semester both at UG and as well PG level. This is done so that they get the feel of the industry and also they become aware of the industry scenario and its requirement so that they can upgrade themselves.

**6.1.5 Give details of the academic leadership provided to the faculty by the top management?**

Setting academic priorities, exposing to wide spectrum of knowledge, investing in people by creating a harmonious atmosphere, promoting research and evaluating faculty are a few significant academic leadership responsibilities that make SVCE distinct. It provides academic freedom to faculties, which aids in strengthening faculty teaching and enriching the student quality. It promotes collegial workplace to create a harmonious atmosphere thus attracts and retains faculty. It provides high impact learning culture by deputing its students and faculty to other universities. SVCE always gives its top priority to research among its other academic duties by providing sabbatical leave to faculty and providing good infrastructure facilities as well. It also evaluates faculty on a routine basis and results are communicated and also discussed with faculty members for betterment.

**6.1.6 How does the college groom leadership at various levels?**

Earlier SVCE had senior academic people heading the various departments who were retired from renowned technical institutions and organizations. During 2009, this practiced was modified by identifying people from middle level (at an average age of 45) and were positioned as heads of departments. This was done with an idea of exploring and nurturing contemporary ideas to excel the department in all possible dimensions.

**6.1.7 How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?**

The college delegates the full authority to prepare the functional autonomy as per the following organizational chart:

The major decisions which have a bearing on the function and the goal of the college are thoroughly in the Governing Council. The governing council is headed by a well known philanthropist and industrialist Dr.A.C.Muthiah, Chairman (Emeritus), SPIC Ltd., and the council has 17 members who are drawn from industry and well known renowned academicians like Prof.M.S.Ananth, Former Director, IIT Madras.

The decisions taken are passed on to the Executive committee comprising Secretary, Treasurer and Principal of the institution. The Executive committee authorizes with suitable guidelines to the Planning and Monitoring Board of the college to find the ways and means for implementing the decisions taken. The staff council of the college is headed by the Principal and has got all the HOD,

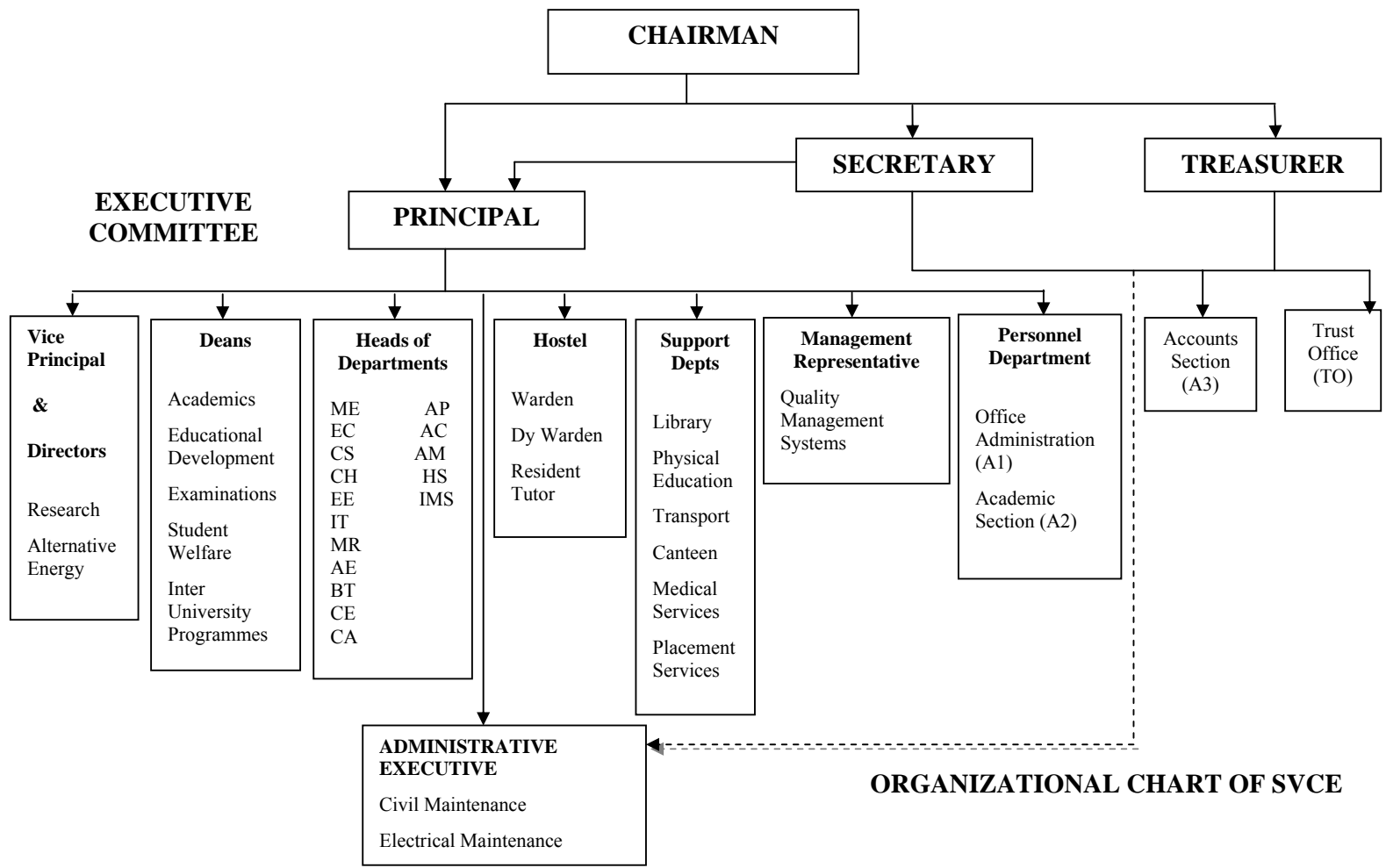


Dean, Directors as members ensures the proper implementation of the decisions and directions given.

Decision making authority is well decentralized in this system. Secretary has the powers to sanction Rs.10,00,000, Principal can sanction upto Rs.2,00,000 lakhs and Heads of the departments can grant upto Rs.20,000. Secretary and Treasurer can jointly review any high value proposal (more than Rs. 10 lakhs) and are empowered to take a decision in the interest of the college with advice of the Chairman.

**6.1.8 Does the college promote a culture of participative management? If 'yes', indicate the levels of participative management.**

Yes, the college does promote a culture of participative management. It has inculcated the practice of hearing the voices of all the subordinates. Every month department meetings are being held in all departments where internal issues within the department are discussed. Every fortnight staff council meetings are also held to discuss and decide issues at the institutional level. Faculty feedbacks are well appreciated and received by the heads of the department and in turn the suggestions of heads of the departments and deans are perceived well by the top management. Leadership in SVCE always recognizes the significance of listening and interpreting the views of all the employees and hence practices this culture meticulously.



## **6.2 STRATEGY DEVELOPMENT AND DEPLOYMENT**

### **6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?**

Yes, SVCE has a formally stated quality policy. Quality policy was originally stated by the Governing Council. Quality policy is derived and aligned with respect to the vision and mission of the institution. Quality policy clearly states the objectives of the institution, their process of progress towards the achievement of objectives and its contribution to the society. All these strategies are monitored by the various objective leaders like academic objective leader, professional objective leader, industrial objective leader, employability objective and the research objective leader. All these leaders frame their own teams and they are designated as respective coordinators for their department. Hence, these department coordinators collect the inputs from their departments and the leader compiles the document for the entire institution. All these processes are standardized over a period of time with the help of process measures using ISO. Every semester these processes are reviewed and the necessary corrections are incorporated.

### **6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.**

Yes, undoubtedly the institute has a perspective plan for development. The institution takes strenuous effort in listing out the key performance indicators from various perspectives for performance assessment and development.

- It addresses the various issues from the stake holder perspective that is, it takes steps to fulfill the requirements of its students, their parents, employer community etc. The institution has an active placement cell addressing the campus placements and it organizes for parents meet to convey their wards performance and to take their inputs as well. It takes feedback from the employer community in order to plan for extra coaching and imparting the necessary skills.
- It also takes effort for improving the internal development of the institution by inculcating harmonious work culture. It streamlines various processes like evaluating methodologies of teaching learning process, research progress, infrastructure facilities etc.
- Learning and growth scope of the institution is also well explored from various dimensions. Every year, the educational development perspective shows steady progress by applying for new UG and PG affiliating programs from Anna University approved by AICTE. Some of the senior faculty members are members of various board of studies and syllabus sub committees. The institution also encourages student and faculty exchange programmes with various universities. Frequently it signs MOUs with various universities and organization for promoting institute industry interaction.

- Financial perspective is also addressed well. Various endowments and grants are received from external organization, alumni chapter etc. Revenue is generated by conducting seminars, workshops, faculty development programs etc. Consultancy grants, funding from research proposal schemes, MODROBS are also made available with the help of eminent faculty.

### **6.2.3 Describe the internal organizational structure and decision making processes.**

The institution functions based on various agendas set. Each agenda is worked upon and propagated with the help of various committees like board of trustees, governing council, staff council, planning and monitoring board, discipline and welfare committee, complaints & redressal committee, anti ragging committee and student association from the faculty end. The student issues are brought into notice from the students' association. These committees' meets often, discusses the related issues and take appropriate decision with respect to the requirement. Refer the organization chart.

### **6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following**

- ***Teaching & Learning***

Feedbacks are taken on a continuous basis from the students as well as from senior professors to assess the teaching skills of the faculty. Students' performance is also assessed by conducting continuous assessment tests, assignments, projects etc. Students are exposed to learning in smart class rooms and are encouraged to give presentations in their own domain to enhance learning and presentation skills as well.

- ***Research & Development***

Infrastructure facilities like well equipped laboratory for student learning as well as for faculty research are made available. The equipments and consumables are purchased often, as and when required to strengthen research activities. The library is also well equipped with required titles and volumes of text books, e-journals, computer hardware and software for conducive learning. Students and faculty are sponsored for presentations in conferences hosted by other institutions both domestic and in abroad. Most of the existing departments have obtained the status of research centre which will help in establishing hard core research activities, supervising and awarding PhDs.

- ***Community engagement***

The institution actively participates in NSS and NCC. Frequently NSS camps are arranged for promoting community service. Every year NCC day is celebrated and the best cadet is identified and awarded due recognition. Apart from this, the institution is an active member in Rotaract club which conducts blood donation camp every year. Often SVCE is awarded as maximum donor. The institution is also an active member in Leo club, youth red cross (YRC) etc.

- ***Human resource management***

Complying with the slogan that “external customers know only what is happening where as only the internal customers know why things are happening”, the institution takes care of its human resources. Employees are given utmost importance and their needs are recognized well. The service rules are made transparent and they are benefited with GLIC, PF, Gratuity, medi-claim policies etc. The faculty are entitled with other benefits like CL, EL, ML, adequate vacation, accommodation in quarters for a few faculty inside the campus, in-house dispensary etc. Pay slips are put up online every month and the salary will be credited to the salary account of the employees on the last working day of every month.

The institution frequently arranges for training programmes in-house and also deputed to other organization for acquiring balanced skills (technical skills, teaching skills, soft skills etc.) from all dimensions. Every time equipment is purchased and installed, software is purchased and installed, the department arranges for a demo session by the supplier.

The institution encourages quality improvement programmes and deputed faculty on sabbatical leave for higher education. Their progress is monitored and based on their achievements incentives are paid, accounted during their appraisal based on which promotions are implemented.

- ***Industry interaction***

The institution has an institute industry interaction cell headed by the industry objective leader of the institution. They promote industrial training for the students and for the faculty as well. Students are sent for internship programmes for a maximum of six weeks during their stay to other industries and universities both domestic and abroad for promoting collaboration. Hence, the institution creates a tie up and signs MOUs. Every academic year it is made sure that the students are taken for a minimum of twelve industrial visits. Both UG and PG students are motivated to undertake their end semester project in the relevant industries of their domain, thus exposing and preparing them to meet the real time requirement in the industry.

- **TEQIP**

The college had submitted for TEQIP funding in the year August 2010 for developmental activities in the institute.

**6.2.5 How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?**

The various activities so far discussed, are scrutinized and report is generated with respect to the QMS requirement. Copies of these reports are maintained in separate file and will be monitored by the ISO coordinator of the department. All these files will be audited twice in a semester, where the first

one is the internal audit and the next is the surveillance audit. The audit report of various functional units will reach the head of the institution with which the activities are monitored and communicated to the respective stake holders. Information is also conveyed through letter, SMS and web communication.

**6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?**

Faculty is paid incentives for producing significant results in the semester examinations and also after completion of their higher degrees like PG incentive and PhD incentives are being paid. Every year after appraisal, with respect to the review of the faculty performance, increments are awarded. In some cases additional incentives are also paid for outperforming people. Faculty members are given cash prizes for publication in national and international journals.

To improve the teaching learning process and to provide a better transfer of knowledge SMART class rooms are provided for each department. Now each department has two SMART class rooms and the next few years all class rooms will be converted into SMART class.

**6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.**

Faculty are made eligible for the following incentives by the Governing Council for implementation.

- i). To recognize the hardwork and to motivate all others to perform even better based on pass % have been put in place.
- ii). To boost the research activity even further
- iii). Guidance given to the students for the best project in UG and PG level
- iv). To retain faculty with Ph.D qualification and to ensure the overall growth of the institution

All the above are implemented from the last academic year.

**6.2.8 Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If 'yes', what are the efforts made by the institution in obtaining autonomy?**

Yes, the institution has applied for autonomy status to Anna University two times. When the inspection committee was about to visit the college, the government has taken the decision to merge the Anna University of Technology and with Anna University for administrative reasons. This has resulted in the inordinate delay for further processing our application. It is learnt that once the matter of the University is resolved and settled the institution may be asked to reapply for autonomous status to Anna University to which it is currently affiliated.

**6.2.9 How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder relationship?**

As per the TamilNadu government instruction, Anna University constituted a complaints and redressal committee. In our institution the chairperson is Dr.Jayamala, Dean Examinations, Prof and HOD, Department of Computer Applications, male member is Dr.A.Venkatesan, Prof and HOD, Department of Mechanical Engineering, Non teaching staff member is Mr.G.Mathiyalagan, Senior Programmer, Department of Computer Applications and the other members are Joint secretary of student association and the representative of non government organizations is Ms.M.Srivalli. Everybody in the institution is made aware of the existence of this committee by publishing it in the calendar. As and when the committee receives complaint, they meet immediately, review and resolve the problems. They also ensure that necessary actions are taken. The complaint details are filed separately and kept confidential with the chairperson of the committee.

**6.2.10 During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?**

Nil. No court case has been filed against the institute.

**6.2.11 Does the Institution have a mechanism for analyzing student feedback on institutional performance? If 'yes', what was the outcome and response of the institution to such an effort?**

Yes, the institution does get the feedback from the students on the continuous basis. Every semester students evaluate their subject teachers using the specified template of ISO. Apart from the every academic year exit feedback are collected from the passing out students based on which best teacher award is given. The institution has also a student council where the grievances and feedback from the students end are received. These complaints are also heard and addressed as and when required.

**6.3 FACULTY EMPOWERMENT STRATEGIES**

**6.3.1 What are the efforts made by the institution to enhance the professional development of its teaching and non teaching staff?**

The institution has fixed the following norms for professional development of faculty and supporting staff

- Each faculty member will participate in atleast one faculty development programme for every two years. This implies that the institution sponsors 140 programmes per year
- Each member of the faculty must be a member of at least one professional society within two years of joining. Presently 99 faculties are member of at

least one society such as IICHE, ISTE, IEEE and other professional bodies. To upgrade the skills of the faculty, the management of the institution encourages its people to register for higher studies. At present there are 46 faculties registered for Ph.D and 13 faculty are pursuing ME/M.Tech Programme

- At least 2% of the supporting staff given training programme. In the year 2013, 23 non-teaching staff was given training in Windows 8 by IMS (Information for Management System) department

### **6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?**

Faculty are empowered to avail the benefits with respect to social and technical up gradation to make them self sufficient. Faculty are entitled to be sponsored for training programmes, paper presentations, attending seminars, workshops, quality improvement programme etc. Immediately after the recruitment of the faculty, they are given orientation programme about the policies and procedures prevailing in the institution. After the probation period the faculties are empowered to utilize the benefits of sponsorship for attending the various programmes organized by other institutions and research organizations. Faculty is encouraged with benefits like medi-claim policies, gratuity, PF and incentives for both better performances as well for acquiring higher educational qualification.

### **6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.**

Every year confidential reports are generated for every faculty as a process of performance appraisal. Earlier a qualitative method of appraisal was followed. Recently, a year before the template for self appraisal was modified on a quantitative basis. This contains of three parts. The first part will be filled by the faculty themselves giving their details of achievement for that year. The second part will be filled by the heads of the department evaluating the performance of the faculty in various dimensions. Once this part is filled, the respective faculty goes through the feedback given by their head of the department and finally signs beneath the second part as an indication of acceptance. The third part will again be filled by the respective heads of the department which will be kept confidential and will not be revealed to the faculty. Here all the activities of faculty like pass percentage of the theory and practical subjects handled, attending affiliating university responsibilities like invigilation, internal and external examiner for laboratory exams, paper valuation etc, participation in department activities, sports, taking the responsibility of bus in charges and other community engagements. Other than teaching learning process and usual administrative activities, research aptitude is also captured. Presentation in conferences and seminars, publication in



national and international journals, funded projects, consultancy work undertaken etc are all measured. All these are evaluated and a score is computed for 100. These views are discussed one to one with the faculty and with respect to their performance their areas of improvement are suggested.

**6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?**

The outcomes of the performance appraisal will reflect in the annual increment, incentives and the promotion of the faculty. They are communicated through annual increment order and promotion orders.

**6.3.5 What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?**

- SVCE Employees Medical benevolent Fund scheme: Employees are entitled for reimbursement, for the treatment taken at Hospital/Nursing Home for self, spouse and unmarried and unemployed children of the employee. All employees whose salary is > 15,000 are availing this benefit.
- E P F – Paid as per P F Act to all the employees
- Gratuity – Paid as per Gratuity Act
- ESI Scheme – Employees drawing less than Rs.15000/- PM. They are covered under ESI and can avail this benefit directly with ESI Clinic/Hospitals
- Personal Accident Insurance – Premium paid by SVCE
- Interest subsidy for Housing loan – Around Rs.1 lac per year (Paid to 25 employees each year)
- Free Transport for all the employees.
- Festival /Special Advance: Maximum Rs.30000/- for all the eligible employees – (Interest free) around 85% of employees are availing this from the inception
- Free medical dispensary is run by the college management in the College campus. A qualified Doctor and lady staff nurse are available for consultation. Free medicines are given for immediate Relief/ first aid. We have 1 ambulance on 24x7 basis
- Staff who complete 10/20 years of service are honored
- Children of the staff who have put in 5 years of service are given assistance for pursuing higher technical studies.
- Staffs tour: Up to Rs.1 lac paid each year for employee's recreation tour.

**6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?**

The college is being a reputed and well sought after one both by the students and the teaching community. The employment here is considered as a recognition of their

talent and honour to them. They also have very good respectability in the other academic circles. All the above has made the attraction of well talented and eminent faculty a simple affair for the college. The college filters the best out of them and employs them. The following table clearly gives the statistics about the retention of the faculty in our institute which indicates the experience in SVCE and also the total experience. Cash Awards are given to those who completed 10 and 20 years of service in our institution.

Period	Cadre	Total No of the faculty – Experience in SVCE					
		Less than 5 years	5 - 10 years	10 - 15 years	15 - 20 years	20 - 25 years	More than 25 years
2008-09	Professor	8	4	11	2	6	0
	Asso Prof	6	4	5	1	0	0
	Asst Prof	114	37	12	4	1	0
2009-10	Professor	7	7	12	1	8	0
	Asso Prof	5	5	5	0	0	0
	Asst Prof	107	45	13	6	0	0
2010-11	Professor	6	9	5	5	8	1
	Asso Prof	2	4	7	2	0	0
	Asst Prof	121	66	14	6	0	0
2011-12	Professor	5	8	3	4	7	1
	Asso Prof	6	6	9	2	1	0
	Asst Prof	106	72	12	6	1	0
2012-13	Professor	5	9	4	4	8	1
	Asso Prof	10	12	11	4	0	0
	Asst Prof	118	76	14	6	1	0

Period	Cadre	Total No of the faculty – Total Experience (SVCE + Other college experience)					
		Less than 5 years	5 - 10 years	10 - 15 years	15 - 20 years	20 - 25 years	More than 25 years
2008-09	Professor	1	0	0	5	5	14
	Asso Prof	1	1	8	6	1	0
	Asst Prof	78	49	9	8	3	1
2009-10	Professor	1	0	1	7	6	15
	Asso Prof	2	2	7	4	1	0
	Asst Prof	62	62	7	7	4	1
2010-11	Professor	1	0	1	4	5	9
	Asso Prof	2	1	2	3	0	0
	Asst Prof	66	77	21	6	1	1
2011-12	Professor	1	0	0	6	5	11
	Asso Prof	2	1	2	9	3	1
	Asst Prof	61	78	17	4	2	0
2012-13	Professor	0	0	0	4	6	15
	Asso Prof	3	4	10	7	3	3
	Asst Prof	72	77	31	8	1	1

## 6.4 FINANCIAL MANAGEMENT AND RESOURCE MOBILIZATION

### 6.4.1 What is the institutional mechanism to monitor effective and efficient use of available financial resources?

The institution has classified each department as a separate cost centre and all the expenses incurred are debited in the respective cost centre. In the beginning of each year, every department furnishes revenue and capital budget which will be reviewed and approved by the trustees. Budget is reviewed by treasurer, secretary and principal on a quarterly basis.

Whenever any deviation occurs in the budget, respective HODs have to address the issue and give justification so that subsequently the same will be approved. Following this procedure, unnecessary purchases are avoided and the available funds are effectively utilized.

After the tuition fee collection, the institution will keep a fund that will be required for another 45 – 50 days as liquid money and the rest will be kept as fixed deposits according to the requirement. Due to this practice the college is able to earn an additional income of approximately 125 – 150 lakhs, as interests. To control all the above operations the institution maintains good stewardship.

**6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audit done and what are the major audit objections? Provide the details on compliance.**

The institution is having qualified practicing chartered accountant as internal and external auditors who are auditing the accounts of the college once in six months. After the audit, the report is sent to the management for review. The auditors are appointed by the board of trustees in the trust board meeting. In addition to this, the institution is having consultants to give opinion on taxation and legal issues.

Last audit was done on 30/09/2012 and as on date there is no adverse remark on the accounts of the institution. The college is filing income tax return every year within the stipulated time. Since the institution is approved by ISO 9001 – 2008, the workings and functionalities are audited by ISO auditors also.

**6.4.3 What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.**

Fee collection is the major source of income for the college. Apart from this trust is funding for capital expenditure like building and purchase of equipments etc. if required. In addition to tuition fee, the institution is also collecting fee towards hostel and transport. College closely monitors the expenditure so that the excess cash other than cash for urgent requirement will be kept as short term deposits to increase the fund flow.

**6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).**

During 2008-09 and 2009-10, the institution has acquired loan from bank hypothecating its land and building generating Rs.11.31 crores for the purpose of construction of additional buildings and class rooms. The institution has settled the loan during 2011-12. Using this fund, the college has constructed around 6588 square meters towards hostel, class room block and ECE block

## **6.5 INTERNAL QUALITY ASSURANCE SYSTEM (IQAS)**

### **6.5.1 Internal Quality Assurance Cell (IQAC)**

**a) Has the institution established an Internal Quality Assurance Cell (IQAC)? If 'yes', what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?**

Yes. The college is a certified ISO organization. The vision and mission is stated in 1.1.1

**b) How many decisions of the IQAC have been approved by the management/ authorities for implementation and how many of them were actually implemented?**

All the decisions are taken in the ISO Management Review Meeting are presented to the governing council by the Principal and after through review the same has been implemented.

**c) Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.**

External members are carrying out the ISO audit every year and also for the renewal of the certificate

**d) How do students and alumni contribute to the effective functioning of the IQAC?**

In the Employability Objective of ISO, the students also give input to the Chief Placement Officer and necessary mock training and new methods of improving the employability have been brought in. Alumni are play a major role to ensure that the students of the college are well placed in the reputed organization and some of the entrepreneur absorb the students in their own concern.

**e) How does the IQAC communicate and engage staff from different constituents of the institution?**

Internal audit is carried out by the members drawn from all the departments who have also being sponsored by the college to undergo Lead Auditor course and other courses as necessary. Professors are generally assigned the job of lead auditor and the Associate Professors, Assistant Professors form part of the inspection committee.

**6.5.2 Does the institution have an integrated framework for Quality assurance of the academic and administrative activities? If 'yes', give details on its operationalisation.**

Yes. The QMS and the various process measures have been well defined and effective implemented.

**6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If 'yes', give details enumerating its impact.**

The college encourages the selected faculty on a regular basis to undergo the audit courses to enable them to perform the internal audit impartially. Further employees are also trained at the department level. New employees are also taken on this job and undergo training both at the department level and outside. Employees are encouraged and sponsored for the lead auditor course.

**6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?**

The college has appointed a seasoned academician as Dean (Educational Development) who is assigned to carry out the academic audit. In addition he is also the head of Centre for Innovative Teaching Methods (CITM). The academic audit comes out with the pros and cons of the teaching methodology as well as means to overcome the same. All the junior faculty are randomly and continuously monitored in this regard. Senior Professors from the department also are roped in to effectively implement the same.

**6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?**

Every six months an audit is carried either by internal or external auditors. The observation, opportunity for improvement and non conformity cited by the auditors are rectified at the earliest. It is pertinent to mention no serious non conformity has been cited over the last few years.

**6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?**

HoD allots the subjects to the faculty as per their specialization. The faculty are requested to submit the Lesson Plan and notes of lesson for 2 to 3 units before the commencement of the semester this will be verified by the HoD. Senior faculty members are asked to review the teaching of junior faculty members. Continuous Assessment Test (CAT), Assignments, seminars as a part of the timetable and parent teacher meeting, Class counseling and Class Committee meeting are the measures in vogue to review the teaching learning process.

**6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?**

Through the Vision, Mission statement, parent teacher meeting and also through the website, whenever appropriate changes are made.

## **CRITERION VII: INNOVATIONS AND BEST PRACTICES**

### **7.1 ENVIRONMENT CONSCIOUSNESS**

#### **7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?**

The college is having Environment consciousness and formed a following team of expert (Energy Team) members to review the energy utilization pattern in the campus. The energy team and its activities are monitored by Director (Alternative Energy). The team which also contains sub committees reviews the energy consumption in the campus and devises a methodology to conserve energy.

The Energy Team

##### 1. Electrical Power and Alternative Energy

- ✓ Dr. M.Gopalakrishnan , Director/Alternative Energy
- ✓ Dr.K.Pitchandi, Professor/Mechanical Engg
- ✓ Dr.T.Raja, Associate professor/ Mechanical Engg
- ✓ Mr.M.Swaminathan, Asst Engineer/EM

##### 2. Water conservation and its Usage

- ✓ Mr.B.Swaminathan, Estate Engineer
- ✓ Mr.R.Srinivasan Estate Engineer (site)

##### 3. Bio gas, Bio Diesel

- ✓ Dr. S.Chandrasekaran,/ Professor/Chemical
- ✓ Dr.K.Pitchandi, / Professor/Mechanical
- ✓ Dr.E. Nakkeeran/ Asso.Prof. Bio Tech

##### 4. Optimum use of Computers and related equipments

- ✓ Dr. M. Krishnamoorthy Prof/CSE

#### **7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?**

##### **\* Energy conservation**

The Energy team reviews the energy consumption and proposes the following means to achieve energy conservation in our campus

- All the lights and fans are to be identified with respect to their switches
- By making the awareness to the students and faculty members to use the energy sparingly.
- Time Table for heavy engineering labs may be staggered.
- Rotary machines in the labs are to be periodically maintained. Energy saving motors to be purchased while new purchase or replacement is made.
- Class room power consumption to be monitored. The appliances in the class room which are not required during the break time may be put off.
- The Incandescent bulbs are replaced with high efficient CFL bulbs.

\* **Use of renewable energy**

- A Bio gas plant of 35 Nm<sup>3</sup> has been constructed in the campus. It utilizes the kitchen and food waste from the Hostel and canteen. The biogas thus generated is used for cooking in the kitchen of hostel.
- A 35 kW solar PV based power plant without battery backup is going to be installed in the campus. The purchase order is issued on 07.05.2013.
- Sewage Treatment Plant has to be made operational for 2,50,000 ltrs and the same may be used for Flush tanks in Toilets and Garden
- The Sumps for water are provided for IT and EC Building to reduce the energy consumption since the water for that Building is twice pumped. Discussed with Estate Engineer for getting the water sump of departments filled directly by Tankers. Estate Engineer is asked to explore the possibility for approach to water tanker etc.
- Solar Water heater may be installed for one of the Hostel Blocks for the use students to bathe. In summer the water can be used in hostel mess for preheating the boiler feed water.
- A Pilot plant for converting the waste plastic into fuel has been constructed to convert the waste plastic bottles from the canteen.

\* **Water harvesting**

All the buildings in the campus is having the facility to collect the water and send the same to the main sump

\* **Check dam construction**

The college does not construct any check dam so far. There is no minor channel, swale, bios wale, or drainage ditch in and around the villages. There is no ground water in the campus. The water is procured in the tankers.

\* **Efforts for Carbon neutrality**

- Solar water heaters are installed in the hostel to reduce the Electrical energy consumption and thereby it reduces the emission of carbon dioxide.
- A 35 kW solar PV based power plant is going to be installed.
- Bio gas plant is installed and operational in the campus to reduce the LPG consumption.
- All the incandescent bulbs are replaced with CFL

\* **Plantations**

- A lot of plantations were done by the CARE (CARE) team in the campus to make it greenery.
- Number of Neem trees were planted using the exit water from the bio gas plant.
- They developed a nursery in the campus to grow more plants in the campus.

\* **Hazardous waste management**

- No hazardous waste is generated. And chemical waste is disposed properly.

**\* e-waste management**

The obsolete computers and other wastes generated from the electronic equipments are auctioned to authorized e-waste dealers and the hazardous materials in those equipments are removed and disposed as per norms. The old computers are also exchanged with new computers.

**7.2 INNOVATIONS INTRODUCED DURING THE LAST FOUR YEARS**

**7.2.1 Innovative efforts in academic:**

- 2-3 smart class room facilities are provided to each department for a conducive learning/interaction between faculty and students.
- State-of-the art infrastructure is developed updating library, computer/internet/Wi-Fi and laboratory facilities.
- The CAT toppers and the University toppers are duly acknowledged with a certificate and a cash prize.
- Every year one second year student has been given the budding bright engineering award.
- Every year one final year student has been given the outstanding student award.
- The best projects done by the students in the engineering departments have been awarded by the various industries.
- Industrial visits are arranged, periodically, by the departments to give the students a practical knowledge and exposure to industrial practices.
- Experiments beyond the syllabus are also conducted in the labs to give wide knowledge to the students.
- Experts from foreign universities are invited to interact with students to make them aware of various avenues available in abroad for their higher education.
- Students are motivated and sponsored to participate and present papers in national and international conferences.
- Mock placement interviews are conducted by the real HR professionals of the industries, who are going to recruit them in the next 6 months.
- Finishing school courses were designed and taught by the experts from various industries.
- Open source language laboratory and English language laboratory are sponsored and developed in the campus by CTS. These two laboratories are very useful for the students to develop their computing and communication skills.

**7.2.2 Innovative efforts in quality assurance:**

- A class committee meeting is conducted twice every semester to address the difficulties faced by the students and faculty members in the teaching and learning process.
- The teaching learning process is reviewed by senior and expert members from SVCE and other renowned institutes like IIT and Anna University.
- Feedback from the students is collected for individual courses (Both theory



and practical courses).

- A Best teacher award has been given every year to encourage and motivate the staff member.

### **7.2.3 Innovative efforts in student control:**

- CCC are installed in various places of the campus for security and control purpose.
- Every class of students has been provided with 2-3 faculty advisors, who will guide them and counsel them.
- A lead counselor has also been given the responsibility of monitoring the dress code of the students.
- The students are also counseled by the respective faculty advisors regularly on the third Tuesday of the month and also by the professional counselors at needy times.

### **7.2.4 Innovative efforts in research activity:**

- Research day was celebrated in March 2013 where faculty presented their research work and best paper was awarded. This has gained great welcome among teachers.
- SVCE Innovations, a technical event for students was conducted for the college. The students participated actively in the model making, paper presentation and distributed prizes.
- Faculty members are being awarded cash prizes for their publications.
- External faculty members and students are allowed to do their research work at our Laboratories. This activity increased the utilization of the lab facility and rendered service to the society. Also the college has earned a decent amount through the consultancy works.

## **7.3 TWO BEST PRACTICES**

### **I Title of the Practice**

To enhance research potential of faculty members.

#### **Goal**

The aim of this particular practice is to provide necessary infrastructure, human resources and motivation to nurture the research competencies among the faculty members.

#### **The Context**

The college offers 10 UG and 10 PG degree programme in various engineering departments. It is the responsible of faculty members to inculcate effective learning methodology in their students to understand various engineering concepts. To accomplish this, they need to be creative and innovative in their approach to teaching / learning activities and should possess holistic idea about the subjects what they taught, which requires some level of research competencies in the teaching faculty members.

**The Practice**

The Institution –Industry interaction cell has been established. The institution encourages the faculty members to publish the research papers, attending national/ International conferences and to carry out consultancy work. The faculty members are encouraged by providing the cash incentive to those who publish research articles in national/ International journals. They were sponsored to attend the national/ International conferences in India/Abroad. The cash incentives are provided to those faculty members who are doing the consultancy work based on the amount and nature of work. As many as 10 MoUs have been signed between the institution and various industries to carry out the research and consultancy activities. MoUs are also signed between foreign Universities also to expose the faculty members to the current research areas.

**Evidence of Success**

The number of Ph.D., degree holder in the institution has been increased considerably. The results of above said practice increases the number of papers published by the faculty members. A lot of research projects have been sanctioned to our institution for doing the research by the faculty members.

**Problem Encountered and Resources Required**

The staff members are finding it difficult to find the time to carry out this type of activities due to their academic commitment. Quarters are in proposal, to encourage the staff members to stay in the campus to carry out the research activities. Laboratories, e-learning facility and computer aided packages are required for which contribution from the Management and money collected from sponsoring institution have been used.

**II Title of the Practice**

To help students who have financial difficulties.

**Goal**

The aim of this practice is to provide the financial support to those who have problem in paying the tuition and other fees. This will help those students to continue their studies without any problem.

**The Context**

The college receives the students from various backgrounds. Some of the students who are meritorious but not capable of paying the tuition and other fees due to their financial conditions. It is the interest of institution to see those students also complete their course without any problem.

**The Practice**

The institution is initiated a scholarship scheme to distribute 5% of tuition fees income to the students as full semester tuition fees scholarship based on merit cum means, economic means and performance in the sports and NCC

activities. Apart from this college has Rs 62 lakhs as scholarship fund ad on 31<sup>st</sup> March 2012, sponsored by various trust and individuals. The interest accruing on this fund is also utilized for giving assistance for purchasing books and instruments.

#### **Evidence of Success**

More number of students receives those scholarships and completed their degree without any problem. The exit feedback from those students clearly indicating the true success of this two scholarship programs.

#### **Problem Encountered and Resources Required**

The institution does not face any problem as such to identify those students to receive the scholarships. Man power and huge amount of money are required to provide this type of assistance at college level.

#### **Contact Details**

Name: Sri Venkateswara College of Engineering

Address: Post Bag #01, Pennalur, Irungattukottai- 602 117.

Sriperumbudur Taluk, Tamil Nadu, India.

Ph: 044 – 27152000 (20 lines), 27163783, 27163784, and 27163785 Email:

acm@svce.ac.in

Website: www.svce.ac.in

Year of Accreditation: 2008 – 2009

Grade awarded by NAAC: B

Contact person: Dr. M. Sivanandam, Principal; Ph: 044 – 27152222; Email:

principal@svce.ac.in

### **Declaration by the Head of the Institution**

I certify that the data included in this Self-Study Report (SSR) are true to the best of my knowledge. This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced. I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Signature of the Head of the Institution

With seal:

Place:

Date: