

Annual Quality Assurance Report (AQAR)

Submitted to

**National Assessment and
Accreditation Council (NAAC)**



Academic Year: 2016 - 17

Submitted by



Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

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The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. (Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013).

Part – A

AQAR for the year (for example 2013-14)

2016 - 17

1. Details of the Institution

1.1 Name of the Institution	Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology
1.2 Address Line 1	# 42, Avadi –Vel Tech Road
Address Line 2	Avadi
City/Town	Chennai
State	Tamil Nadu
Pin Code	600 062
Institution e-mail address	vtu@veltech.edu.in
Contact Nos.	044-26840099
Name of the Head of the Institution:	Prof. Beela Satyanarayana
Tel. No. with STD Code:	044-26840099
Mobile:	08754416291
Name of the IQAC Co-ordinator:	Dr. A. Abudhahir
Mobile:	09940226524
IQAC e-mail address:	diaq@veltech.edu.in
1.3 NAAC Track ID (For ex. MHCOGN 18879)	

OR

1.4 NAAC Executive Committee No. & Date:
 (For Example EC/32/A&A/143 dated 3-5-2004.
 This EC no. is available in the right corner-
 bottom of your institution's Accreditation
 Certificate)

EC / 71 / A&A / 23.1 dated 16.11.2015

1.5 Website address:

www.veltech.edu.in

Web-link of the AQAR:

http://www.veltech.edu.in/wp-content/uploads/2018/04/AQAR2016_17.pdf

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	A	3.17	2015	5 years (16.11.2015 to 15.11.2020)
2	2 nd Cycle				
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC : DD/MM/YYYY

09.09.2013

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (for example AQAR 2010-11 submitted to NAAC on 12-10-2011)

- i. AQAR 2015-16 submitted to NAAC on 07.02.2017
- ii. AQAR _____ (DD/MM/YYYY)
- iii. AQAR _____ (DD/MM/YYYY)
- iv. AQAR _____ (DD/MM/YYYY)

1.9 Institutional Status

University State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved
Institution (eg. AICTE, BCI, Yes No

MCI, PCI, NCI)

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.10 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) Engineering Health Science Management

Others (Specify)

1.11 Name of the Affiliating University (*for the Colleges*)

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University

University with Potential for Excellence UGC-CPE

DST Star Scheme UGC-CE

UGC-Special Assistance Programme DST-FIST

UGC-Innovative PG programmes

UGC-COP Programmes Any other (Specify)

2. IQAC Composition and Activities

2.1 No. of Teachers	<input type="text" value="8"/>
2.2 No. of Administrative/Technical staff	<input type="text" value="8"/>
2.3 No. of students	<input type="text" value="1"/>
2.4 No. of Management representatives	<input type="text" value="1"/>
2.5 No. of Alumni	<input type="text" value="1"/>
2.6 No. of any other stakeholder and community representatives	<input type="text" value="1"/>
2.7 No. of Employers/ Industrialists	<input type="text" value="1"/>
2.8 No. of other External Experts	<input type="text" value="1"/>
2.9 Total No. of members	<input type="text" value="22"/>
2.10 No. of IQAC meetings held	<input type="text" value="4"/>

2.11 No. of meetings with various stakeholders:	No.	10	Faculty	8	Non-Teaching Staff	3
	Students	6	Alumni	2	Others	-

2.12 Has IQAC received any funding from UGC during the year? Yes No

If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National State Institution Level

(ii) Themes

2.14 Significant Activities and contributions made by IQAC

- Conducted IQAC meeting quarterly and submitted AQAR to NAAC.
- Developed Academic Audit manual and conducted audit twice a year for all departments.
- Conducted faculty training programmes/ workshops on Effective Teaching Learning.

- Applied for various national rankings/ratings – NIRF, Times Higher Education (THE), NBA extension for two programs (Aero & Mech).
- Preparation of NBA SAR for four programmes namely 1. Automobile Engineering 2. Civil Engineering 3. Computer Science and Engineering 4. Electronics and Communication Engineering.
- Submitted the Institution data in the All India Survey on Higher Education (AISHE) portal.
- Designed stakeholders survey questionnaires for continuous improvement.
- Analysed stakeholders’ feedback and given inputs to various administrative systems for continuous improvement.
- Encouraged senior faculty members to attend CDIO international conference and Asian regional meeting.

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
<p>NBA</p> <ol style="list-style-type: none"> 1. One more year extension for NBA accreditation for two programs namely 1. Aeronautical Engineering 2. Mechanical Engineering 2. Decided to go for NBA – Tier I accreditation for four B.Tech programmes namely 1. Automobile Engineering 2. Civil Engineering 3. Computer Science and Engineering 4. Electronics and Communication Engineering <p>CDIO</p> <ol style="list-style-type: none"> 1. Establishment of CDIO workspace <p>Choice Based Credit System (CBCS)</p> <ol style="list-style-type: none"> 1. CBCS regulations for M.Tech programme <p>Ph.D Regulations</p> <ol style="list-style-type: none"> 1. To improve research quality <p>Active Learning</p> <ol style="list-style-type: none"> 1. Employing Active Learning course delivery <p>Teaching Developers Initiative (TDI)</p> <ol style="list-style-type: none"> 1. Faculty forum to share and discuss about novel / innovative teaching methods practised in their classroom course delivery <p>Rankings / Ratings</p> <ol style="list-style-type: none"> 1. To participate in NIRF India Rankings 2017 2. To participate in Times Higher Education (THE) Asian Rankings 2017 	<p>NBA</p> <ol style="list-style-type: none"> 1. Extended one more year for NBA accreditation for two programs. 2. Pre-visit Qualifiers submitted to NBA for four B.Tech Engineering programs. Self Appraisal Report (SAR) is under process. <p>CDIO</p> <ol style="list-style-type: none"> 1. Established CDIO workspace <p>Choice Based Credit System (CBCS)</p> <ol style="list-style-type: none"> 1. Academic Regulations M. Tech R16 followed. <p>Ph.D Regulations</p> <ol style="list-style-type: none"> 1. Ph.D Regulations 16 framed. <p>Active Learning</p> <ol style="list-style-type: none"> 1. 40% of the course delivery has made through Active Learning <p>Teaching Developers Initiative (TDI)</p> <ul style="list-style-type: none"> • 45 faculty members met 15 weeks and shared their classroom experience, vis-a-vis implementation of innovative teaching methods. <p>Rankings / Ratings</p> <ol style="list-style-type: none"> 1. NIRF <ul style="list-style-type: none"> • 58th position in Engineering • 65th position in University level. 2. Times Higher Education (THE)

Plan of Action	Achievements
<p>Research Project/ Publications</p> <ul style="list-style-type: none"> Encouraging faculty members to submit project proposals to various funding agencies and to publish papers in good quality journals. <p>Filing Patents</p> <ul style="list-style-type: none"> Filing patents by students & faculty <p>Paper Presentations</p> <ul style="list-style-type: none"> Presenting research papers on educational quality/ curriculum development/ teaching-learning at international conferences 	<ul style="list-style-type: none"> 43rd Rank in top ranking institutions in Asia 74th in THE world ranking Universities below 50 years. <p>Research Project/ Publications</p> <ul style="list-style-type: none"> 14 project proposals were submitted and three got sanctioned. About 300 papers were published by the faculty in SCI/ Scopus indexed journals. <p>Filing Patents</p> <ul style="list-style-type: none"> 24 patents were filed by students & faculty this year <p>Paper Presentations</p> <ul style="list-style-type: none"> Presented papers in 13th International CDIO Conference, University of Calgary, Calgary, Canada, June 18-22, 2017.

2.16 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

36th BoM held on
24.02.17

Provide the details of the action taken

- Based on the discussion, chalked out plan was redrafted.
- Suggestions given by the members of BoM were incorporated in the AQAR.
- Plan of action for the academic year 2018-19 was discussed at length vis-à-vis Academics, Quality Assurance, Industry Relations, International Relations, Research & Development, Campus to Corporate

Part – B

Criterion – I

Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	13	Nil	13	-
PG	24	18	24	-
UG	09	2	11	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	-	-	-
Total	48	20	48	-

Interdisciplinary				
Innovative				

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	35
Trimester	
Annual	

1.3 Feedback from stakeholders* <i>(On all aspects)</i>	Alumni	✓	Parents	✓	Employers	✓	Students	✓
Mode of feedback	Online	✓	Manual	✓	Co-operating schools (for PEI)			

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

Yes every semester syllabi is updated by BOS.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Nil

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	349	235	71	40	3

2.2 No. of permanent faculty with Ph.D.	91
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2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year	Asst. Professors		Associate Professors		Professors		Others		Total	
	R	V	R	V	R	V	R	V	R	V
	68		4		6		1		79	

2.4 No. of Guest and Visiting faculty and Temporary faculty	83	04	-
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2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars/	11	145	21
Presented papers	12	119	-
Resource Persons	-	7	1

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- CDIO (Conceive- Design-Implement-Operate): An innovative educational framework encourages hands – on learning for the students, which gives the real industry atmosphere.
- CBCS (Choice Based Credit System): provides flexibility to the students to change their programme at any time.
- Learning by Facilitation: Seven active learning workspaces (Engineering Hives) help the students to learn actively with peers.
- TDI: A faculty forum where the faculties involve in peer discussion about various innovative teaching methods that they have practised in the classroom, which greatly help them to meet the needs of the students.
- Facilitated with a computer and a projector in all the classrooms.
- Continuous evaluations through various assessments done at regular intervals.
- Orientation Programme to rejuvenate the first year students about the course which helps them to understand the subjects clearly.
- V - Learn online learning platform sets a bridge between the teacher and the students in teaching learning process. Teachers update their notes and assess the students through V-Learn.

2.7 Total No. of actual teaching days during this academic year

180

2.8. Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

- Double Valuation for PG Programmes.
- Photocopy of the answer sheets are provided to the students when applied for re-valuation.
- Question papers are set in such a way to assess the course outcomes of the courses.
- To assess students K-Levels, Question papers are set based on Bloom's Taxonomy knowledge levels, K1 – Remember, K2- Understand and K3- Apply.

2.9 No. of faculty members involved in curriculum restructuring / revision / syllabus development as member of Board of Study / Faculty / Curriculum Development workshop

110

2.10 Average percentage of attendance of students

87%

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme		Total no. of students appeared	Division				Pass %
			Distinction %	I %	II %	III %	
B. Tech	Aeronautical Engineering	60	20.00	48.33	-	-	68.33
	Automobile Engineering	28	17.86	42.86	-	-	60.71
	Civil Engineering	115	13.04	39.13	-	-	52.17
	Computer Science and Engineering	105	20.95	46.67	-	-	67.62
	Electronics and Communication Engineering	140	18.57	51.43	-	-	70.00
	Electrical and Electronics Engineering	35	22.86	54.29	-	-	77.14
	Electronics and Instrumentation Engineering	2	-	50.00	-	-	50.00
	Information Technology	14	7.14	35.71	-	-	42.86
	Mechanical Engineering	312	22.12	44.55	-	-	66.67
	Metallurgical Engineering	1	100.00	-	-	-	100.00
	Bio Medical Engineering	1	-	-	-	-	0.00
M.Tech	Computer Science and Engineering	5	40.00	60.00			100.00
	Internal Combustion Engines	25	32.00	68.00			100.00
	Automotive Electronics And Embedded Systems	5	60.00	40.00			100.00
	Aeronautical Engineering	4	25.00	75.00			100.00
	Automobile Engineering	22	40.91	59.09			100.00
	Electronics and Communication Engineering	9	33.33	44.44			77.78

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- The IQAC plays vital role in the development of teaching and learning processes.
- Prepares an academic calendar to convey the examination schedule, working days, holidays, vacations etc. to the faculty & students.
- Organises meetings and takes the opinion of different heads of the departments.
- To enhance the quality, the following measures are taken:
 - Result analysis meeting , reviews and discussion
 - Internal and external academic audits for Laboratory courses.
 - Analysis of faculty feedback given by the students.
 - Remedial classes for slow learners.
- The progress of student is monitored through unit test, midterm test & assignments.

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	-
UGC – Faculty Improvement Programme	-
HRD programmes	28
Orientation programmes	112
Faculty exchange programme	8
Staff training conducted by the university	85
Staff training conducted by other institutions	65
Summer / Winter schools, Workshops, etc.	195
Others	235

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	56	-	18	-
Technical Staff	56	-	18	-

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Well established research park comprising various industries supported labs and centers.
- Provision for seed money for research
- Categories A, B & C for Faculty with Ph.D, where they shall choose academic and research activities in the ratio 20:80, 50:50, 80:20 respectively.
- Promotes research publications and presentations by paying cash rewards and reimbursement of conference expenses.
- Encourages the faculty members to publish in Scopus indexed journals and recognizes them by giving incentives for each publication.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	1	13	4	18
Outlay in Rs. Lakhs	26.35050	2668.52743	2428.45272	265.357007

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	2	1	1	2
Outlay in Rs. Lakhs	10.02000	0.50000	0.50000	10.04000

3.4 Details on research publications

	International	National	Others
Peer Review Journals	493	96	-
Non-Peer Review Journals	152	48	-
e-Journals			
Conference proceedings	243	223	-

3.5 Details on Impact factor of publications:

Range	0.033-9.3	Average	4.65	h-index	17	Nos. in SCOPUS	620
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3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received in Lakh
Major projects	2016-17	DST IK GITA CVRDE CARS CEFIPRA DST TBI	242845272	147731342
Minor Projects	2016-17	IEI	50000	50000

Interdisciplinary Projects	2016-17	DST IK GITA DST TBI CEFIPRA	241592522	147393100
Industry sponsored	2016-17	CVRDE CARS	1252750	338242
Projects sponsored by the University/ College	2016-17	VEL TECH	175000	50000
Students research projects (other than compulsory by the University)	2016-17	VEL TECH	80000	40000
Any other(Specify)	-	-	-	-
Total			243150272	295602684

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST

DPE DBT Scheme/funds

3.9 For colleges

Autonomy CPE DBT Star Scheme

INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	-	04	-	-	-
Sponsoring agencies	-	-	-	-	-

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations International National Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs:

From Funding agency	2956.02684	From Management of University/College	200
Total	3156.02684		

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	24
	Granted	-
International	Applied	-
	Granted	-
Commercialised	Applied	-
	Granted	-

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
27	1	22	1	3	0	0

3.18 No. of faculty from the Institution who are Ph.D. Guides

63

and students registered under them

284

3.19 No. of Ph.D. awarded by faculty from the Institution

12

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF	10	SRF	5	Project Fellows	5	Any other	1
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3.21 No. of students Participated in NSS events:

University level	200	State level	-
National level	-	International level	-

3.22 No. of students participated in NCC events:

University level	94	State level	4
National level	5	International level	-

3.23 No. of Awards won in NSS:

University level State level
 National level International level

3.24 No. of Awards won in NCC:

University level State level
 National level International level

3.25 No. of Extension activities organized

University forum College forum
 NCC NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

Sl. No.	Name of the Programme /Activity	Number of Participating Students	Description of the Programme
1	National Institute of Visually Handicapped (NIVH)-Scribes Exam	60	NSS students acted as scribe at NIVH, Ponnammalle.
2	World Health Day- Blood Donation Camp	125	NSS Students organized Blood Donation Camp.100 units were collected.
3	International Charity Day-Feed the Need- Clothes Collection	25	3 rd year NSS students and CPC collected clothes from the students and faculty and distributed to the needy people through Mother Teresa Charitable Trust.
4	NSS Special Camp	200	Organized Swachh Bharat and awareness programmes in the adopted villages.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	52.03 Acres	14.72 Acres	Institution Funds	66.75 Acres
Class rooms	75	90		165
Laboratories	72	18		90
Seminar Halls	14	3		17
No. of important equipment purchased (\geq 1-0 lakh) during the current year.	Computers, Lab Equipment, furniture & fixtures, student amenities	Computers, Lab Equipment, furniture & fixtures, student amenities		
Value of the equipment purchased during the year (Rs. in Lakhs)	19.54 (Crores)	76.52 (in Lakhs)		203052000
Others	-	-		

4.2 Computerization of administration and library

<ul style="list-style-type: none"> • Implements the Institution Management System and ERP Modules in academic and administrative level. • All the processes are made online from admissions to declaration of results. • Provides different logins for Students, Parents and Faculty. • The Library records are online and RFID supported.
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4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	84396	28434623	7714	3257910	92110	31692533
Reference Books	3125	1051775	375	281250	3500	1333025
e-Books	45000	150000	3679	27000	48679	177000
Journals	1129	3711776	75	300000	1204	4011776
e-Journals	12899	6591753	35427	1268469	48326	7860222
Digital Database	3	4593833	1	1985779	4	6579612
CD & Video	4200	-	-	-	4200	-
Others (specify) RFID	1	898110	-	-	1	898110

Kindle	20	234960	-	-	20	234960
Library Software	1	55000	1	145000	2	200000
Computers	90	2575000	-	-	90	2575000

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	1474	978	225 Mbps LL	Part of computer lab	147	132	217	
Added	106	97	315 Mbps LL		1	8	2	5 laptop/TAB
Total	1487	975			148	140	219	5

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- Provided computers for access to quality study and reference material to the faculty.
- Extended the optical fiber backbone in all departments and administrative buildings.
- Upgraded its Firewall, core switches and internet bandwidth.
- Provided Wi-Fi hot-spots both inside the campus and in the Hostels.

4.6 Amount spent on maintenance in lakhs :

i) ICT	33.62
ii) Campus Infrastructure and facilities	228.62
iii) Equipment	16.66
iv) Others	55.73
Total :	334.63

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Introduced student centric welfare schemes, addressing various requirements of residential students.
- Mentors provide necessary counseling and monitor the progress of the student in attendance, studies and extracurricular activities and provide necessary counseling and support.
- Various committee for students: SPARSH (Sensitization, Prevention and Redressal of Sexual Harassment), Anti-ragging Committee, Disciplinary Committee, Grievances and Redressal Committee and Students Council Committee.
- Student Feedback System: Students are at liberty to write their complaints. The drop boxes are checked periodically and remedial actions are carried out to resolve the issue.

5.2 Efforts made by the institution for tracking the progression

- Deputed one faculty as a mentor for 15 students to address their problems
- The mentors track their mentees' Academic Performance and other related details.
- The student counsellor handles the students' problems both in the campus and the hostel.
- Special classes are conducted for slow learners to improve their academic performance.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
4371	289	253	-

(b) No. of students outside the state

2411

(c) No. of international students

08

Men	No	%	Women	No	%
	4219	86		694	14

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
1325	354	57	3177	-	4913	3141	301	135	2618	-	6195

Demand ratio

1:9

Dropout %

2.25

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Personal guidance by the in-house faculty members for GATE
- Trainers from other institutes for Civil Services (UPSC) and other competitive examinations.

5.5 No. of students qualified in these examinations

NET	NA	SET/SLET	NA	GATE	6	CAT	4
IAS/IPS etc	-	State PSC	-	UPSC	-	Others	18

5.6 Details of student counselling and career guidance

- The major objectives of counselling are to direct students to achieve their personal goals and steer them towards academic excellence and emotional stability are
- Counselling is carried out for assisting, guiding and supporting the student community.
- The number of students counselled in the Institution and different hostels of the Institution are furnished below:

Place	2016-17
Institution	56
Prince Hostel	470
Queens Hostel	360
International Hostel	347
Lords Hostel	43

No. of students benefitted 1276

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
51	530	394	26

5.8 Details of gender sensitization programmes

S. No	Date	Programme Name	Location
1	12.08.2016	International Youth Day	VTU CAMPUS
2	19.08.2016	International Photography Day	VTU CAMPUS
3	19.08.2016	World Humanitarian Day	VTU CAMPUS
4	12.09.2016 to 18.09.2016	NSS Special Camp	Adopted Village
5	24.09.2016 & 25.09.2016	Awareness Program	Southern Railways
6	20.06.2017	International Yoga Day	VTU CAMPUS

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports: State/ University level National level International level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Name of the Scholarship	Amount
Financial support from institution	1188	Vel Tech Mahatma Gandhi National Merit Scholarship	31027543
Financial support from government			
Financial support from other sources			
Number of students who received International/ National recognitions			

5.11 Student organised / initiatives

Fairs: State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed:

- Students who exhibit behavioural misconduct in the classroom are counselled by the mentors.
- By the active and integrated efforts of the mentor, counsellor and the parents of the students, the student is persuaded to focus on their academics and pursue their studies well.

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

To create, translate and share frontiers of knowledge embedded with wisdom and innovation for a positive transformation of emerging society.

Mission

To nurture excellence in teaching, learning, creativity and research; translate knowledge into practice; foster multidisciplinary research across science, medicine, engineering, technology and humanities; incubate entrepreneurship; instill integrity and honor; inculcate scholarly leadership towards global competence and growth beyond self in a serene, inclusive and free academic environment.

6.2 Does the Institution has a management Information System

YES

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Curriculum development based on

- Outcome Based Education
- Choice Based Credit System
- Feedback obtained from the stakeholders, teachers, students, alumni, experts from industries and Parents.
- External experts from Industry and Institutes in Board of Studies.
- Academic Council looks into overall academic growth and quality improvement.
- First member from India to join Conceive- Design- Implement- Operate (CDIO) world-wide initiative in 2016; an innovative curricular framework for Engineering and Technology programmes founded by MIT -USA and Chalmers University of Technology –Sweden.
- Educational Taxonomies such as Bloom, Dave and Bloom are employed for curriculum development and course delivery and assessment of learning outcomes in Cognitive (Knowledge), Psychomotor (skills) and Affective Domain (attitude) respectively.

6.3.2 Teaching and Learning

- 50% of the syllabus topics in each course are delivered through Active Learning Methods such as
 - Jig-saw
 - Think-Pair- Share
 - Peer Instruction
 - Concept Test
 - Mud card

- Flipped Classroom
- Problem/ Project Based Methods
- Placement Training right from the second year is executed.
- Field Trip and Industrial Visit for better understanding of the curriculum.
- Seminars, Conferences, Workshops are organized periodically in different disciplines.

6.3.3 Examination and Evaluation

Examination

- Continuous evaluation system is followed which includes Internal evaluation (Continuous Assessment) for 40 marks and End Semester examination for 60 marks
- One question paper out of three is chosen randomly by VC/COE on the day of examination or the previous day of the examination.
- Question papers are scrutinized by the experts on its quality to check whether the outcome is met.

Evaluation

- Dummy numbers are allotted randomly to the answer script and not in serial order.
- Tabulators are employed for Practical and Theory examinations. These tabulators cross check the marks entered against each and every question and also the total marks.
- The marks are entered by the examiners online and also in the foil card for both Practical and Theory examinations. The index page of these evaluated answer scripts are scanned and cross verified with the marks entered by the examiners online.

6.3.4 Research and Development

The University has constituted various committees as mentioned below to guide New Project Proposals and to monitor the progress of funded projects and research scholars.

- School wise Research Advisory Committee, comprises of eminent savants from various distinguished Government and Private Research labs such as DRDO, DST, CSIR, CDAC etc.,
- R&D Review Committee for Individual Departments to assess new Proposals.
- School Research Committee, headed by the Dean of the School with faculty members from each school as a member of the committee along with the Dean of Research Studies to monitor the progress of the Research Scholars.

6.3.5 Library, ICT and physical infrastructure / instrumentation

- The Central Library and the department libraries are constantly equipped with the latest arrivals.
- Increased the hours from 8am to 8pm (Including Sundays).
- All faculty and students can avail NPTEL facilities from Central Library.
- In addition to 95610 numbers of books, the library maintains UG project reports, PG and Ph.D Thesis, E-books, E-Journals and Knowledge Resource Centre (repository of projects).

- The digital knowledge center enables access to the following E-Resources through library website: E-Database, E-Journals, IEEE, ASCE, ASME, J-Gate-Management and Engineering, Scopus and E-book.

The Computer Lab and ICT facilities:

- Internet facility is available in all the departments and hostels.
- The Cyber Library provides the much needed e-learning space to the Institution community.
- The Institution provides CCTV surveillance services, 24 x 7 Internet and Wi-Fi facility in campus and in hostels.

6.3.6 Human Resource Management

- The Human Resource Management policies of the institution are in compliance with UGC regulations and State Government guidelines.
- The appointment and promotions are made in transparent manner and as per defined and notified criterion.
- The organizational hierarchy of the University is well defined in which the job profile and job description in each and every office is clear to all stakeholders.
- The faculty is provided with opportunities to organize and attend seminars and conferences at national and international level.
- Grant is provided to fund the travel partially.
- Faculty Development Programmes are organized to equip the teachers with latest academic and research tools.

6.3.7 Faculty and Staff recruitment

- Faculty recruitment committee is constituted as per the guidelines of UGC.
- The committee consists of three subject experts for the post of Professor and Associate Professor, two experts for the post of Assistant Professor in addition to the Chancellor nominee, Director Academics, the Dean Faculty and Head of the department concerned.
- The Vice Chancellor is the Chairman and Registrar is the secretary for the interview boards.
- The minimum qualifications and experiences are followed as per the guideline of the concerned regulatory body.
- The Staff (Non Teaching both technical and non technical) selection committee is composed of Vice Chancellor as the Chairman and the Registrar, the concerned head of department or section head or the research centre incharge as members.
- The minimum qualifications/ experiences are as per the nature of work following the norms of state government/ concerned regulatory body.

6.3.8 Industry Interaction / Collaboration

- Industry Relations division inked MoUs with more than 500 industries, research organisation/laboratories/associations including those in abroad and healthy interactions with above 2000 industries.
 - 100% of the students undergo In-Plant Training,
 - 80% of UG Students doing their Project work/ Internships at Industries,
 - about 470(150 minimum per year) expert lectures as a part of the credit course were delivered

- by industry persons
- 10 PG Programme & 1 UG programme in Collaboration with Industries,
- 5 Centre of Excellence with the Support of Industries/ Research Institute,
- Joint Research & Consultancy projects with Industries in India & Foreign Country (Korea, France, Canada etc),
- Developing Ebike with Novelty in Motor technology in Collaboration with the Industry from France ensure the strong Industry-Academia relationship of the institution Deemed to be University.

6.3.9 Admission of Students

- Admissions of students are done once in a year on the basis of All India Common Engineering Entrance Examination conducted by the Institution Deemed to be University.
- The Entrance test is conducted both by Paper & Pencil Test (PPT) & Computer Based Test (CBT).
- Reservation Policy for SC/ST/OBC and Physically Challenged candidates will be applicable as per the rules of Government of India for the time being.

6.4 Welfare schemes for

Teaching	✓
Non teaching	✓
Students	✓

- Employment Provident Fund & Gratuity
- Free Mediclaim for faculty and their family
- Free Group Insurance for students, teaching and non-teaching
- Staff quarters facility
- Interest free Loan facility from Staff Welfare Fund
- Accidental Policy with United India Assurance for Employees
- Basic Pay scales based on 6th Pay Commission recommendations
- Annual Ph.D. Allowance for faculty
- One month Salary as special Pay to Staff Members for Continuous Service
- Sabbatical Leave to pursue Higher Education / Research
- Higher increments for those who perform well
- Laptops are issued to Faculty members while at service to pursue Research and Development work
- Mother Fund scheme to all faculty
- Faculty members are encouraged to take up consultancy, projects and research work with special incentive
- Faculty members are sponsored to present papers in conferences abroad periodically.
- Maternity leave
- Scholarship for staff Children
- 70% of the faculty and staff benefited out of various employee welfare schemes
- Gym and Fitness in both students Gents and Ladies Hostel
- Vel Tech Mahatma Gandhi National Merit Scholarship for meritorious students
- Education Loan assistance
- Tie – up with nearby Hospital for immediate medical attention at concessional rates

- Bonvoyage amount for higher studies in abroad

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done Yes NO

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	AISHE	Yes	Academic Auditor
Administrative	Yes	-	Yes	Administrator Auditor

6.8 Does the University/ Autonomous College declare results within 30 days?

For UG Programmes Yes NO

For PG Programmes Yes NO

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

- Photocopy of the semester end examination answer scripts are provided to the students on request.
- If a student is not satisfied with the revaluation result, then he may apply for Challenge Evaluation where his paper is evaluated by an internal examiner and an external examiner from other institution.
- Question papers are scrutinized by the experts on its quality and check whether all the course outcomes are met by covering the entire syllabus.
- 50% of UG question papers are set by the external experts approved by Board of Studies.
- Results for UG Programmes are announced within 15 days from the last examination and for PG Programmes within 21 days.
- Special examination is conducted for the interested students having arrear in only one course upon the completion of 8 semesters.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

6.11 Activities and support from the Alumni Association

- Annual Alumni Meet: Annual alumni meeting is conducted on Jan 26th of every year- 26th JAN 2017.
- Regional Chapters: The local chapters are established for networking of the alumni within a region.
 - Hyderabad Chapter – 27th MAY 2017

- Delhi Chapter – 19th AUG 2017
- Pune Chapter – 26th AUG 2017
- Batchwise Reunion – Decennial meet is conducted every year
 - Decennial Celebration (2007 Batch) – 22nd APRIL 2017
- Institution Governance: Vel Tech Deemed to be University involves alumni in the governance bodies of the Institution.
 - Board of Management
 - Academic Council
 - Board of Studies
 - IQAC Meetings
- Strategic Planning: Process of designing the strategic planning of the deemed university is widely popularized among alumni across the world and their inputs are received through online.
 - Alumni feedback
 - Employer feedback
 - Curriculum development
- Alumni Student Interaction: Alumni interact with their juniors through Skype and also visit the campus to have interactive session to increase student's knowledge in
 - Industry Practices
 - Higher Studies
 - Entrepreneurship
- Alumni Scholarships: Vel Tech alumni support by offering a wide range of scholarships each academic year in order to motivate their juniors.
- Career Guidance: Career guidance counseling is given by the alumni, which helps the students to understand effectively and explore themselves for better understanding of the current needs in industries.
- Alumni Placement: Alumni help in enabling placement and internships
- Alumni Membership Card: Life time Alumni membership card is issued to all graduand of the year.

6.12 Activities and support from the Parent – Teacher Association

- Parent – Teacher meeting is arranged once in a semester by each school.
- Parents meet the respective mentor assigned to their ward on the day of meeting and will come to know the academic performance and other details about the ward.
- Parents can express their views to the mentor, HoD and Dean.

6.13 Development programmes for support staff

- The Institution Deemed to be University conducts several training and development programmes for skill upgradation of supporting staff of the Institution.
- The training programmes are being organized for mid level and senior level supporting staff.
- Workshops on Yoga and Stress Management are also organized.

6.14 Initiatives taken by the institution to make the campus eco-friendly

- Solar water heating systems are used; CFL and LED lights are used in all the offices of the departments.
- The Sewerage Treatment Plant to reuse waste water for irrigational purpose.
- Plantation programmes are organized in the campus on regular basis.
- The Earth Day, Environment Day are celebrated. Workshops, seminars are organized on environment awareness by the Institution Club Committee.
- The NSS and NCC volunteers conduct Swachh Bharat programmes in the campus and the public places periodically.
- The Volunteers also provide additional inputs to the school children in Science and Mathematics courses under Rastriya Avishkar Abhiyan.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

- Availability of Research forums enables the faculty members and students to interact each other for joint developments.
- Inter and Intra Schools Project Competition and Exhibition are being organized regularly
- Faculty and students participate in various competitions organized by professional bodies.
- Created Alumni network to enable alumni interaction and mentoring.
- Introduced I2P model (Internship to Placement model)

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

- Faculty members are given leave for pursuing their full time education – either PhD or Post Doctoral fellowship. On-Duty permissions are given to the faculty members for their part time education – Ph.D.
- Conferences involving Different Departments / Schools of the University along with other National and International Organizations gives opportunity for the faculty members and students to interact with the other Departments
- The University supports with the funds for the sanctioned projects, even if any delay is there to receive fund from funding agency.
- Separate Lab Space with all the decisive infrastructures and amenities are being afforded to all the sponsored Projects and dynamic Researchers.
- Organized the following programmes for the benefit of the faculty members
 - Faculty Orientation Programme on “Effective Teaching” on 04-04-2017, “Be a Successful Teacher” held on 24-07-2017, “Know Y (our) University” on 04-08-2017 & “Research Opportunities in Veltech University” on 23-08-2017
- Visited Product based companies to increase the placement opportunities for the students.
- Provided company based training to meet the company demands.
- Formed of coding club to augment the coding skills of the students.
- Separate Lab Space with all the decisive infrastructures and amenities are being afforded to all the sponsored Projects and dynamic Researchers.

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

- The Centralized approach of the Research facilities creation enables the faculty members and students to interact with all the domain area experts.
- The following research centers are established within the campus focusing on multi-disciplinary research
 - E-Waste Management Facility
 - Centre for Autonomous System Research
 - Tinkering Lab (3D Printing Lab)
 - Centre of Virtual Instrumentation
 - Centre of Design, Engineering and Manufacturing
- Dial your University is a unique programme which is not available in many other Institutions. This programme helps the parents from various places to contact the Institution and get the feedback about the academic performance, attendance and other details about their wards.

7.4 Contribution to environmental awareness / protection

- The institution has done a green audit to monitor the use of different environmental factors like water consumption, electricity consumption, and use of renewable energy.
- Green audit of the campus is carried out by the staff periodically by supervising the maintenance of the existing trees and identifying places for planting new trees.
- Tree plantation is periodically done to provide a congenial atmosphere.
- Swachh Bharat was initiated. The Sole message in Swachh Bharat is to keep the premises clean. Routine Auditing is done.
- The Institution also partners ITC's Wealth out of Waste (WOW) initiative.
- In the year of 2016-2017 the institution contributed 56287kgs of waste paper for the recycling project WOW and saved 1238 trees.

7.5 Whether environmental audit was conducted? Yes NO

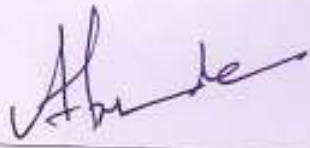
7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

- Outcome based curriculum and syllabi, teaching-learning and assessment and evaluation to achieve the programme outcomes in accordance with national as well as global standards (NBA, Washington Accord and other member countries of WA etc).
- Flexible curriculum to accommodate wide range of educational activities like industrial visits, internships, semester abroad programmes, etc.
- Choice Based Credit System from academic year 2015-16 onwards
- Well structured, systematic teaching learning and evaluation methods (Bloom's and Dave's Taxonomy) for attainment of programme outcomes in accordance with national as well as global standards
- Young faculty members using Active Learning Methods for teaching learning

- Vibrant Industry – Institute Interaction
- Renowned projects in association with reputed R&D Organisations and Industries like DST, DRDO, IGCAR, Daimler-India, etc.
- Dynamic international relations through active MOUs with renowned R&D labs and academic institutions in India as well as abroad.
- State-of-the-art Centres of Excellences for e-waste management, engine testing, 3D Printing etc.
- Adequate rooms/ facilities available for staffs and students to satisfy academic, research and extracurricular requirements.
- Each academic school consists of several state-of-the-art laboratories to provide academic and research support to students as well as faculty. There are more than 50 labs for various disciplines with sophisticated instruments, furniture, and other facilities.
- State-of-the-art library with subscription to reputed international journals and access to OCW.
- Well equipped laboratories for UG, PG as well as Research Scholars
- Strong motivation to students to organize and participate in wide range of co-curricular and extracurricular activities at all levels.
- Department of Physical Education proactively encourages the students to participate extensively in the various forms of games, track & field events and adventure sports at all levels.
- Student's involvement in all councils, committees, academic and administrative boards to discuss and provide help in their welfare, performance and achievements.
- Excellent placement and training support for holistic development of the individual for personal enhancement and career growth.
- Strong mentoring system to provide valuable services to students by counselling and guiding them in their academic and non-academic needs.

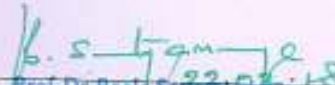
8. Plans of institution for next year

- Revision of curriculum for Management programmes.
- Introduction of PG programmes in School of Sciences and Humanities.
- Designing project centred courses modules for B.Tech ECE programme.
- Establishing workspaces in Engineering departments for carrying out mini & capstone projects.
- Curriculum and Teaching-Learning
 - Combining Introduction to Engineering, FME Project and Engineering Practices Laboratory as a single Integrated Course focusing on Engineering skills.
 - 60% of the course delivery through Active Learning Methods.
- Exploring optimal carrier paths for students through flexible academics and CBCS.
- Enhancing faculty Internship in industries and institutes of repute abroad.
- Establishing industry collaborated labs.
- Six month/ One year internship for the students.
- Offering more number of skill oriented courses by industry exposure.
- Attracting more International students and faculty.
- Placing more students in product based IT companies and Core Engineering companies.
- Submitting project proposals to funding agencies by research faculty.
- Getting NBA accreditation for four B.Tech programmes namely;
 1. Automobile Engineering
 2. Civil Engineering
 3. Computer Science and Engineering
 4. Electronics and Communication Engineering
- Second Cycle for NBA accreditation for two B.Tech programmes namely;
 1. Mechanical Engineering
 2. Aeronautical Engineering
- Participating in Times Higher Education (THE) Ranking and QS star Ratings
- Participating in national Rankings and Ratings.
- Applying for NAAC Re-assessment
- Obtaining AICTE approval for all Programmes.

Name 

Prof. Dr. A. Abinavahir
Director Quality Assurance


Signature of the ~~Coordinator~~ **Chairperson** IQAC
Ranganjan Dr. Sagunthala
B&D Institute of Science and Technology
Established in the University Year 1984 of IQAC Act 1987

Name 
Prof. Dr. Beela Satyanarayana
Vice Chancellor


Signature of the ~~Chairperson~~ **Chairperson** IQAC
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