

# Annual Quality Assurance Report for Academic Year 2014 – 2015

Submitted by



Bansilal Ramnath Agarwal Charitable Trust's  
**VISHWAKARMA INSTITUTE OF TECHNOLOGY**  
666, Upper Indiranagar, Bibwewadi, Pune – 411 037  
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

Submitted to



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद्

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

*An Autonomous Institution of the University Grants Commission*  
P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, Bangalore - 560 072 India

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# The Annual Quality Assurance Report (AQAR) of the IQAC for Academic Year 2014-15

## Part – A

### I. Details of the Institution

1.1 Name of the Institution	BRACT's Vishwakarma Institute of Technology
1.2 Address Line 1	666, Upper Indira Nagar,
Address Line 2	Bibwewadi,
City/Town	Pune
State	Maharashtra
Pin Code	411 037
Institution e-mail address	director@vit.edu
Contact Nos.	91 20 24202284 (Dean Quality Assurance)
Name of the Head of the Institution:	Prof. (Dr.) R.M. Jalnekar
Tel. No. with STD Code:	91 20 24202221
Mobile:	9552544489

Name of the IQAC Co-ordinator:

Prof. A.S. Marathe

Mobile:

9822418794

IQAC e-mail address:

ashutosh.marathe@vit.edu

1.3 NAAC Track ID (For ex. MHCOGN 18879)

EC/64/A&A/02 dated 08.07.2013

1.4 Website address:

www.vit.edu

Web-link of the AQAR:

<http://www.vit.edu/index.php/quality-assurance/annual-quality-assurance-report-ay2014-15>

### 1.5 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 <sup>st</sup> Cycle	A	3.29	2013	5 yrs.

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

26.07.2013

1.7 AQAR for the year

2014-15

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)

Not Applicable – This is the First AQAR being submitted to NAAC after latest Assessment

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 Yes  No

(eg. AICTE, BCI, 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)

Savitribai Phule Pune University

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

Autonomy by State/Central Govt. / University	<input type="text" value="√"/>		
University with Potential for Excellence	<input type="text"/>	UGC-CPE	<input type="text"/>
DST Star Scheme	<input type="text"/>	UGC-CE	<input type="text"/>
UGC-Special Assistance Programme	<input type="text"/>	DST-FIST	<input type="text"/>
UGC-Innovative PG programmes	<input type="text"/>	Any other ( <i>Specify</i> )	<input type="text"/>
UGC-COP Programmes	<input type="text"/>		

## **2. IQAC Composition and Activities**

2.1 No. of Teachers	<input type="text" value="09"/>
2.2 No. of Administrative/Technical staff	<input type="text" value="03"/>
2.3 No. of students	<input type="text" value="NIL"/>
2.4 No. of Management representatives	<input type="text" value="01"/>
2.5 No. of Alumni	<input type="text" value="NIL"/>
2.6 No. of any other stakeholder and community representatives	<input type="text" value="NIL"/>
2.7 No. of Employers/ Industrialists	<input type="text" value="NIL"/>
2.8 No. of other External Experts	<input type="text" value="01"/>

2.9 Total No. of members

2.10 No. of IQAC meetings held

2.11 No. of meetings with various stakeholders: No.  Faculty   
Non-Teaching Staff  Students  Alumni  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

1. Implementation of Attendance Monitoring System through ERP
2. Implementation of Formative Assessment component entry and declaration through ERP
3. Implementation of Course feedback, exit feedback, Faculty Appraisal by students
4. Development of Student Portal
5. Formation of Research Policy of the Institute for promotion of Research Culture

2.15 Plan of Action by IQAC/Outcome

Plan of Action	Achievements
<p>1. Implementation of Quality Management System on ERP Platform</p> <p>2. Broadening the scope of Exit Feedback to understand future prospects of students</p> <p>3. To understand requirements of recruiters of UG students</p> <p>4. To promote Research activities in the Institute</p>	<p>1. Deployment of Form Formats on ERP Platform</p> <p>2. Revision in the Exit Feedback form</p> <p>3. Designed Industry feedback during placements</p> <p>4. Established Research Steering Committee, encouragement to faculty for submission of Research Proposals</p>

2.16 Whether the AQAR was placed in statutory body      Yes       No

Management       Syndicate       Any other body

Provide the details of the action taken

Annual Quality Assurance report was presented during the Board of Management Meeting on 14<sup>th</sup> August 2015.



## Part – B

### Criterion – I

#### 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	6	0	0	0
PG	8	0	0	0
UG	9	0	0	0
PG Diploma	-	0	0	0
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	-	-	-
<b>Total</b>	23	-	-	-
Interdisciplinary	-	-	-	-
Innovative	-	-	-	-

√      √      √      √

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

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	√

1.3 Feedback from stakeholders\* (On all aspects)

Alumni  - Parents  -- Employers  Students

Mode of feedback : Online  Manual  Co-operating schools (for PEI)  --

*\*Please provide an analysis of the feedback in the Annexure*

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

B.Tech. Syllabus Revision

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

Binghamton University Research Centre in Mechanical Engineering

## Criterion – II

### 2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
193	126	33	21	13

2.2 No. of permanent faculty with Ph.D.

44

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
148	0	33	26	22	3	16	0	219	29

2.4 No. of Guest and Visiting faculty and Temporary faculty

58

26

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	19	3	3
Presented papers	01	--	--
Resource Persons	01	--	01

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

1. Pre-Semester planning about theory, laboratory and Tutorial courses
2. Predefined self study component for all courses.
3. Experiential learning opportunities through group mini projects in each semester.
4. Exposure to Industry through industry visits.
5. Internship opportunities for hands-on experience in Summer Break
6. Organization of Project Exhibition
7. Skill Development in Computer and Electronics Trades in Engineering Workshops
8. Definition of Course Outcomes and Program Outcomes

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

187
-----

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

1. Open Book Examination 2. Online MCQ Examination 3. Online query handling for online Mid Semester Exam
--

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

42	193	193
----	-----	-----

2.10 Average percentage of attendance of students 

83.76%
--------

2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
B.Tech. Chemical Engg.	74	66.22	18.92	1.35	0	0
B.Tech. Computer Engg.	191	71.2	11	1.60	0.5	0
B.Tech. Electronics & Telecommunication Engg.	156	68.6	12.80	3.20	0	0
B.Tech. Electronics Engg.	110	61.8	17.30	4.50	0	0
B.Tech. Information Technology	45	71.1	8.90	0	0	0
B.Tech. Industrial Engg.	39	41	23.1	5.1	0	0
B.Tech. Production Engg.	50	70	8	6	0	0
B.Tech. Instrumentation & Control Engg.	77	71.4	11.7	5.2	0	0
B.Tech. Mechanical Engg.	123	74.8	7.3	0.8	0	0

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

- 1) Through internal and external academic audits.
- 2) Analysis of faculty feedback given by the students

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	18
UGC – Faculty Improvement Programme	NIL
HRD programmes	45
Orientation programmes	56
Faculty exchange programme	1
Staff training conducted by the university	NIL
Staff training conducted by other institutions	88
Summer / Winter schools, Workshops, etc.	49
Others	NIL

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	65	0	0	9
Technical Staff	46	0	0	3

## Criterion – III

### 3. Research, Consultancy and Extension

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

- Establishment of research forum for various activities such as
  - Sharing of research by internal faculty members
  - Arranging expert lectures by outside eminent personalities
  - Developing training modules
  - Arranging conferences and workshops
  - Submitting research proposals for government and non-government funding agencies
  - Pursuing consultancy work, developing incubation centers.
  - Writing patents
- Established research steering committee to coordinate the activities of the research forum.
- Arranging Training/ Discussion Sessions arranged in academic year (2014-15) for the research forum:
- Establishing Industry Advisory Board (IAB) for every department
- Having a mentor from IIT for every department
- Formalizing the procedure for Departmental research data collection
- Formalizing Training need Identification, Deputation and Feedback Process
- Formalizing the Research Appraisal Scheme For faculty members
- Developing a policy for VIT Research Grant
- Developing Conference and Workshop Deputation Policy
- Conferences and workshops organized by research forum
  - National Conference (NCMOC – 2015) Keynotes by Dr. Sheogaonkar, Guest speakers – Dr. Sachin Patwardhan, P. S. V. Natra
  - One Week STTP on ‘Recent Trends in Engine Technology, Emission control Technology and Hybrid Vehicles (at Mechanical Engineering Department)
  - Workshop of Design of Experiments & Taguchi Methods (at Industrial and Production Engineering Department)
  - Upcoming International Conference on Information Processing (IEEE sponsored) (at Electronics Engineering Department)
  - Workshops planned at Chemical and Instrumentation Department
  - Workshop and panel discussion arranged for proposal writing

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	3	4	2	41
Outlay in Rs. Lakhs	23.65	46.07	34.94	18.01

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	0	15	0	35
Outlay in Rs. Lakhs	0	20	0	107.01

3.4 Details on research publications

	International	National	Others
Peer Review Journals	29	2	-
Non-Peer Review Journals	13	1	-
e-Journals	21	2	-
Conference proceedings	40	129	-

3.5 Details on Impact factor of publications:

Range  Average  h-index  Nos. in SCOPUS

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
Major projects	2013-15	ISRO	20 Lakhs	16.84 Lakhs
	2014-16	ISRO	27.95 Lakhs	NIL
	2014-16	AICTE	7.06 Lakhs	NIL
	2013-15	DST	23.27 Lakhs	13.68 Lakhs
	2013-15	CSIR	5.64 Lakhs	5.64 Lakhs
Minor Projects	2013-14	BCUD, SPPU	3.25 Lakhs	1.25 Laks
	2014-15	BCUD, SPPU	20 Lakhs	NIL
Projects sponsored by the University/ College	2014-16	VIT	50 Lakhs	50 Lakhs
	2013-15	Bil-Milenda Gate Foundation in partnership with AIT Bangkok	9 Crores*	4.01 Lakhs
<b>Total</b>	<b>21</b>		<b>157.17 Lakhs</b>	<b>91.42 Lakhs</b>

\* - Amount sanctioned to AIT, Bangkok

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

3.10 Revenue generated through consultancy

3.11 No. of conferences

organized by the  
Institution

Level	International	National	State	University	College
Number	-	5	3	-	10
Sponsoring agencies	-	IEEE, BCUD	SPPU	-	VIT, COMSOL

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  From Management of University/College

Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	7
	Granted	NIL
International	Applied	NIL
	Granted	NIL
Commercialised	Applied	NIL
	Granted	NIL

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
26	-	-	1	-	-	25

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them

16

60

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

2

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

JRF 0 SRF 1 Project Fellows 0 Any other 0

3.21 No. of students Participated in NSS events:

University level 100 State level -  
National level - International level -

3.22 No. of students participated in NCC events:

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

3.23 No. of Awards won in NSS:

University level - State level 9  
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 9  
NCC - NSS 70 Any other -



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

- Blood donation camp
- Atmabodh - Computer literacy Programs for Women, senior citizen and underprivileged children
- I2I – Ignited Innovators of India
- NSS – Kirloskar Vasundhara International Film Festival (Social Movies)

## 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	29039 sq.m	--	--	29039 sq.m
Class rooms	52	--	--	52
Laboratories	118	--	--	118
Seminar Halls	10	--	--	10
No. of important equipments purchased ( $\geq$ 1-0 lakh) during the current year(2013-14).	-	24	--	--
Value of the equipment purchased during the year (Rs. in Lakhs)	191.50	123.18	--	--
Others	--	--	--	--

#### 4.2 Computerization of administration and library

Central Library is using the SLIM 21 Library Software with various modules for all library activity. Circulation Section, Journal Section, Procurement and Processing Section are fully computerised. Online public access catalogue facility is available within the campus for all students and staff. Bar coded based issue / return of books.

Central Library has started SMS service from February 2014 for the benefit of students. Now students are getting SMS for their overdue books.

News related to UGC, AICTE, DTE, University of Pune as well as News related to our Institute are now available on Institute Website.

Softcopy of old question papers is now available on Institute Website.

Biometric Attendance record keeping of staff

Digitization of important documents such as land documents, service books etc.

#### 4.3 Library services:

	Existing		Newly added		Total	
	No.	Value (Rs.)	No.	Value	No.	Value
Text Books	52117	165.83 L	7647	19.18 L	59764	185.01 L
Reference Books	2898	82.60 L	39	2.84 L	2937	85.45 L
e-Books	373	1.41 L	2070	1.54 L	2443	1.54 L
Journals	213	8.71 L	3	.16 L	216	7.92 L
e-Journals	2419	14.61 L	1206	1.99 L	3625	16.60 L
Digital Database NPTEL	132	0.5 L	-	-	132	0.5 L
CD & Video	1447	2.56 L	210	0.1 L	1657	2.66 L
Others (specify) 1) BS Standards 2) DELNET	523	.64 L	-	-	523	0.64 L

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	1221	377	80	80	80	28	576	-
Added	171	70	-	-	-	-	101	-
Total	1392	447	80	80	80	28	677	-

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

<p>Internet Access through -</p> <p>Aircel Internet leased line : 16 Mbps</p> <p>Reliance leased line : 2 Mbps</p>
--

4.6 Amount spent on maintenance in lakhs :

i) ICT	2.13
ii) Campus Infrastructure and facilities	79.24
iii) Equipments	1.50
iv) Others	2.03
<b>Total :</b>	<b>84.90</b>

## Criterion – V

### 5. Student Support and Progression

#### 5.1 Contribution of IQAC in enhancing awareness about Student Support Services

1. Counselling and Grievance Redressal by IQAC members
2. Organising and conduction of Technical events such as Robocon, Melange, Viculp, AGON, etc.
3. Fostering Technical and personality growth of students on the aegis of various students chapters such as IEEE, IE(I), ACM, IETE, ISA, SAE, etc.
4. Sports facilities on campus or by renting playgrounds and premises for students

#### 5.2 Efforts made by the institution for tracking the progression

- Through QMS by checking attendance and academic Non conformity
- Through formative assessment throughout the semester
- Interim reviews for Projects and Seminars
- Counselling through class teachers and Dept. Heads

#### 5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
3642	396	7	--

#### (b) No. of students outside the state

118

#### (c) No. of international students

99

	No	%		No	%
Men	2986	73.95	Women	1052	26.05

#### U. G.

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
1941	338	107	611	24	3383	2000	328	124	610	46	3642

#### P. G.

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
272	30	5	62	2	356	236	29	6	79	3	396

Demand ratio 1:100          Dropout % 1.36

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

By arranging Guest Lectures of past students and experts regarding preparation for competitive examinations such as UPSC, MPSC, IES etc.

No. of students beneficiaries

200

#### 5.5 No. of students qualified in these examinations

NET	-	SET/SLET	-	GATE	77	CAT	25
IAS/IPS etc	-	State PSC	6	UPSC	6	Others (GRE)	56

#### 5.6 Details of student counselling and career guidance

1. Dialogue and discussion with Class Teacher, Senior Faculty Member about routine issues as well as career planning.
2. Career guidance workshop under Entrepreneur Development Cell

No. of students benefitted

977

#### 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
132	788	501	3

#### 5.8 Details of gender sensitization programmes

Session by Ms. Radha Giri – CEO , Midas Touch Consultancy about challenges and opportunities for women entrepreneurs.

## 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	Amount
Financial support from institution	NIL	NIL
Financial support from government	1922	1056.802 L
Financial support from other sources	132	10.54 L
Number of students who received International/ National recognitions	NIL	NIL

### 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: Nil

## Criterion – VI

### **6. Governance, Leadership and Management**

#### 6.1 State the Vision and Mission of the institution

Vision : To be globally acclaimed Institute in Technical Education and Research for holistic Socio-economic development

Mission : 1. To impart knowledge and skilled based education in collaboration with Industry, Academia and Research Organizations 2. To strengthen global collaboration for students, faculty exchange and joint Research 3. To prepare competent Engineers with the spirit of Entrepreneurship 4. To inculcate and strengthen Research aptitude amongst students and faculty

#### 6.2 Does the Institution has a management Information System

##### **Computerization of administration**

Administration at VIT is computerized under ERP. Following are the objectives of ERP.

- To provide one central repository for all information that is shared by all the various ERP facets in order to smooth the flow of data across the organization.
- To enhance productivity, efficiency of processes to achieve institutional objectives.
- Modular design to facilitate seamless integration of new requirements and growth.
- To reduce the response time by effectively transferring crucial information.
- To reduce paper work and increase operational efficiency.
- To streamline the numerous functions performed by the institute as a whole.

ERP provides a fully automated solution for running institutional processes with following Modules

- Registration
- Admission
- Fee Collection
- I-Card Generation
- User Management
- On Line Mid Semester Examination
- Sending Result Of Mid Semester On SMS And Email.
- Sending SMS, mail to students
- Staff Appraisal System ( feedback)
- Feedback based courses to faculty. Creation ,update of question
- Exam Marks Entry
- Examiner appointment, marks entry of theory TA, ESE and LAB marks.
- Exam Result
- Exam result calculation, declaration, sending SMS
- Exam Gradation
- Exam seating arrangement and many other exam utilities
- Staff Record Storage
- Leave Management
- Load Allocation subject assignment to staff before start of semester
- Timetable generation and various reports
- Room database, time table preconditions. staff conditions, reconditions of departments
- Course ,institute feedback
- Feedback on course contents , institute feedback
- Dynamic Query analyzer
- Availability of different type of information in required format.
- Payroll processing and staff management.



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

#### 6.3.1 Curriculum Development

- Module Pattern
- Reduced Class strength
- Exposure to international languages such as French, German, Spanish
- Four semester long communication and Soft Skill Courses
- Mini Project – Every semester
- Computer and Electronics oriented workshops alongwith conventional workshops
- Commerce, Law, IPR related electives
- Yoga, Philosophy, Ethics related electives
- Health, Hobbies, Skills related electives
- PD Courses designed and conducted by Industry or Industry Experts
- Comprehensive Viva Voce
- Internationally compatible Academic Calendar to provide internship opportunities for substantial duration
- Self paced planning of Engineering – slow learners and fast learners
- Honors – Mini specialisation in special domain and Minor – Interdisciplinary knowledge acquisition facility

#### 6.3.2 Teaching and Learning

English Proficiency tests, bridge courses for Diploma to Degree direct admissions are carried out effectively in the Institute. For advanced learners, internship activities are supported. Possibilities such as Honors course are scheduled from the forthcoming Academic Year. Tutorial sessions are in-built component for many relevant subjects. For mentoring the students, an effective Class Teacher – Guardian scheme is in place for the past few years.

Group discussions, quizzes, open book exams, MCQs based assessment are followed. The use of multimedia such as LCD, OHP is very common. Audio visual aids for language courses are available. The Library has a variety of CDs which are uploaded on a server for common usage. Also the NPTEL (National Program for Technology Enhanced Learning) resources can also be used within the campus through campus wide network. Field visits are a common feature. Through visits, demos, expert lectures maximum efforts are taken by the Institute to supplement the teaching-learning process.

The examination pattern has a strong continuous assessment component. The student progress is monitored by identifying non-performing students and by taking effective measures to address the non conformities. The Institute conducts Class Test, Mid Semester Exam and End Semester Examinations. The students are aware of the continuous assessment performances and are given opportunity for verification and revaluation of marks.

Industry experts also design and teach courses. Faculty from Purdue University teach courses in Mechanical Engg. And Instrumentation Engg.

### 6.3.3 Examination and Evaluation

- Setting up of question paper to challenge various essential abilities of students such as analysis, synthesis, interpretation, design, etc. based on Blooms' Taxonomy rather than conventional memory recall based questions
- Teacher assessment based on tutorials where ever applicable and Home Assignment for all subjects / courses
- Central Assessment Programme at the end of Semester
- Intimation of student performance and announcement of result via SMS and e-mail
- Declaration of result within 15 days
- Extra term for Final Year Courses – Summer Term
- Identification of academic and attendance defaulters and counselling for improvement in student performance
- Credit based system based on competition of SPI which is dependent on Grade points
- Formative and summative assessment
- Open book / MCQ / conventional Class Test
- MCQ based online Test with objective questions of varying degree of difficulty

### 6.3.4 Research and Development

1. A research steering committee was set up, whose meetings are held twice a semester
2. This committee is instrumental in working on following initiatives:
  - Setting up VIT research quality policy: Publication requirements, research proposal submission requirements for faculty of various cadres, PhD Scholars and masters students
  - Identifying departmental thrust areas and leveraging consultancy work by the faculty, based on these thrust areas.
  - To develop Industry Institute Linkages, collaborative research entrepreneurship and incubation centres
  - Identifying training needs of the faculty and deputing them to attend various seminars workshops and conferences to fulfil those needs.
  - To conduct inter-departmental research meetings once in a month to foster interdisciplinary research collaborations amongst the faculty of distinct departments.
  - To make sure University of Pune norms are followed for the conduction of the PhD program at the research centre
3. Institute faculty has received Research Grants from ISRO, BCUD - SPPU

### 6.3.5 Library, ICT and physical infrastructure / instrumentation

- Library :
  - Central Library is using the SLIM 21 Library Software with various modules for all library activity.
  - Circulation Section, Journal Section, Procurement and Processing Section are fully computerised.
  - Online public access catalogue facility is available within the campus for all students and staff.
  - Bar coded based issue / return of books.
  - Central Library has started SMS service from February 2014 for the benefit of students. Now students are getting SMS for their overdue books.
  - News related to UGC, AICTE, DTE, University of Pune as well as News related to our Institute are now available on Institute Website.
  - Softcopy of old question papers is now available on Institute Website.
- ICT :
  - Broadband connection – connectivity speed improved from 16 Mb to 18 Mb
  - Development of mobile app for student related information on website
  - Development of Video conferencing facility
  - PC configuration – upgradation of PCs
  - Online fee collection using Gateway
  - Project registration module
  - Facebook group for First year students
- Physical Infrastructure :
  - Campus security using surveillance cameras
  - Renovation of T&P facility
  - BT road construction
  - Food and canteen facility improvement
  - Refurbishment of Computer , Electronics and DESH Department
  - Construction of elevated service reservoir

### 6.3.6 Human Resource Management

- Submission of leave and sanctioning through ERP.
- Creation of data base for newly recruited faculty using ERP
- Integration of HR data for time table., feed back and allied activities
- Scanning of service books and other mandatory documents
- Updation of service books for qualification improvements using ERP

### 6.3.7 Faculty and Staff recruitment

- Presentation , technical / non technical interviews, establishment of panel for faculty recruitment involving Dean, Registrar, Head of the Department, Senior Professor along with Director as a Chairman.
- Induction Training Programme for newly recruited staff
- Exit interview of the retiring / resigning faculty

### 6.3.8 Industry Interaction / Collaboration

- Representation on Board of Studies, Academic Board and Board of Management
- Consultancy projects
- Placement activity
- Guest lectures
- Professional Development Courses
- U.G./ P.G. Project sponsorship
- Internship opportunities during Summer Vacation
- Industrial visits
- Joint research programme
- Annual HR Meet to enhance employability of students
- Participation in CII and other Industry Surveys
- Formation of Industry Advisory Board in each Department
- Annual HR meet for interaction with recruiters

### 6.3.9 Admission of Students

- Showcasing VI Institute activities through News papers, campaign
- Counselling and guidance through Book publication
- Academic reforms to address needs of Industry, academia and Society at large

6.4 Welfare schemes for	Teaching	<ul style="list-style-type: none"> <li>• Group Insurance</li> <li>• Kalyankari Yojana</li> <li>• Credit Co-operative Society</li> <li>• Provident Fund and Gratuity</li> <li>• Tie – up with nearby Hospital for immediate medical attention at concessional rates</li> </ul>
	Non teaching	
	Students	<ul style="list-style-type: none"> <li>• Earn and Learn Scheme</li> <li>• Scholarships</li> <li>• Educational Loan assistance</li> <li>• Tie – up with nearby Hospital for immediate medical attention at concessional rates</li> </ul>

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	Professor from IIT Bombay, Powai	Yes	Dean Quality Assurance and ISO Consultant
Administrative	Yes	External auditor approved by BOM	Yes	Chief Finance Officer

6.8 Does the University/ Autonomous College declares 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?

- |  |
|--|
| <ul style="list-style-type: none"> <li>• Auto –allocation of seating arrangement.</li> <li>• Personalized Time Table available to the student upon entry of General Registration Number</li> </ul> |
|--|

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

N.A.

6.11 Activities and support from the Alumni Association

- Representation in Board of Studies
- Alumni meets of Chemical Engineering and Instrumentation Engineering pass outs
- Material and technological support
- Interaction with faculty about Academics and Research

6.12 Activities and support from the Parent – Teacher Association

NIL

6.13 Development programmes for support staff

- Training for use of Fire Extinguishers

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

- 1) Utilisation of computers - Number of office procedures are online. Unit Test and its result is also given online to all students. E-journal subscription is available to staff and students in the Library.
- 2) Bio-metric machines are used for daily attendance purpose.
- 3) Maintenance of trees, lawns, bushes by applying fertilizers and pesticides
- 4) Using the back side of one-side printed paper for drafting purposes. Recycling of waste paper through agency is carried out regularly, instead of burning it.
- 5) Dried leaves of trees are used for preparing compost.
- 6) Number of students are making use of municipal transport facility, rather than personal vehicles to avoid air-pollution.
- 7) Low Wattage consuming CFL (Compact Fluorescent Lamps) are installed in the campus. CFL Lamps, fans, computers, printers and other electricity consuming items are switched off or shut down to save electricity.
- 8) Eco-friendly and Energy Star compliant computer peripherals and other electronic and electrical appliances are used.

## 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.

1. Academic innovations to improve teaching learning at M.Tech. level
  - Soft Skill Courses , Semester Projects , Comprehensive Viva Voce
2. Inclusion of online fee payment through Gateways using ERP
3. Facebook Group for First year students
4. SMS alerts about book return deadline by Central Library
5. Filing of patents by faculty and students

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

1. Plan – To revise Under Graduate Structure & Syllabus  
Action Taken - Implementation from Academic Year 2014-15
2. Plan – Department Advisory Boards activities  
Action Taken - Meetings of Department Advisory Boards took place
3. Plan – Interaction with Department Mentor  
Action Taken – Interaction of Department Mentors with Department faculty regarding Research guidance, facility support and academics
4. Plan – To organise HR Meet  
Action Taken – HR Meet was organised on 03.07.2015 in Pune

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

1. PD Courses by Industry
2. Student Exchange Programme
3. Internships
4. Proper design of Academic Calendar
5. Declaration of results within 15 days after the Examination
6. Conduction of Online Test
7. Stake Holders' Feedback and its use for improvement
8. Conduction of annual HR Meet
9. ISO 9001: 2008 implementation
10. Active Forum to address Girl students and Women faculty issues
11. Computer literacy and training to High School students and Senior Citizens around the Institute
12. Study Centre for IGNOU - MCA
13. Financial assistance to needy students

#### 7.4 Contribution to environmental awareness / protection

1. All electrical and electronics equipments are switched off when not in use
2. CFL tubes and lamps are installed
3. Photographs / videos are digitally stored instead of paper albums or plastic tape
4. Appeal to all students and staff for using public transport or sharing the vehicle
5. Green coverage area is around 200 sq. mtrs.
6. Underground drainage and storm water system is available which is connected to Corporation line.
7. Research contribution of faculty from Chemical Engg. And Mechanical Engg. Department in development of cost effective toilets for rural India

7.5 Whether environmental audit was conducted? Yes  No

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

Institute carries out Management Review Committee meetings periodically to address quality related, academic and other issues .

#### 8. **Plans of institution for next year**

1. To organize International conference in Multidisciplinary areas
2. To conduct orientation program for newly joined faculty
3. To carry out experiential learning activity for some courses
4. To increase faculty efforts to procure research funding from various funding agencies.
5. To organize Industry meet as a stakeholder interaction initiative.
6. To strengthen Industry tie-ups

*PROF. A. S. MARATHE*

*Sd/-*

*Signature of the Coordinator, IQAC*

*PROF. (DR.) R. M. JALNEKAR*

*Sd/-*

*Signature of the Chairperson, IQAC*



## Annexure I

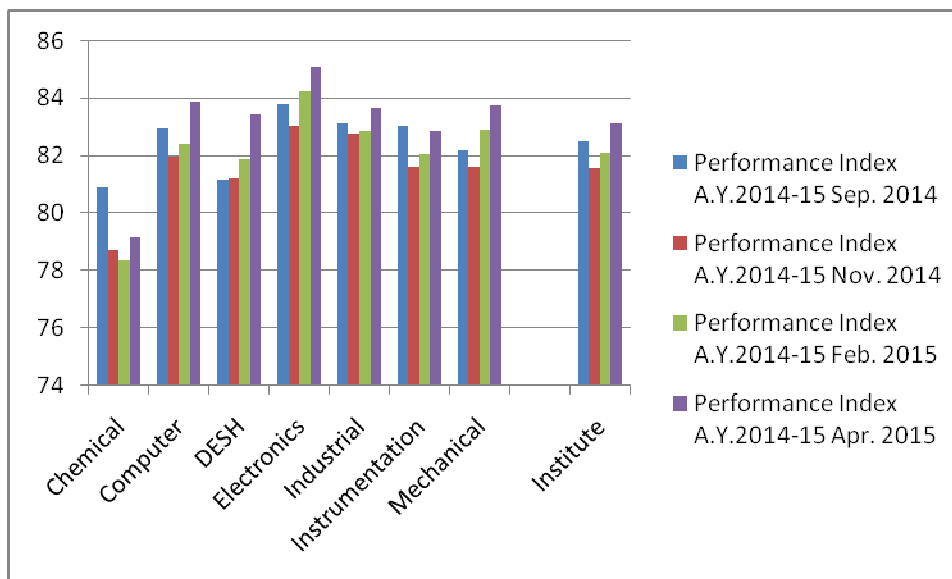
### Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

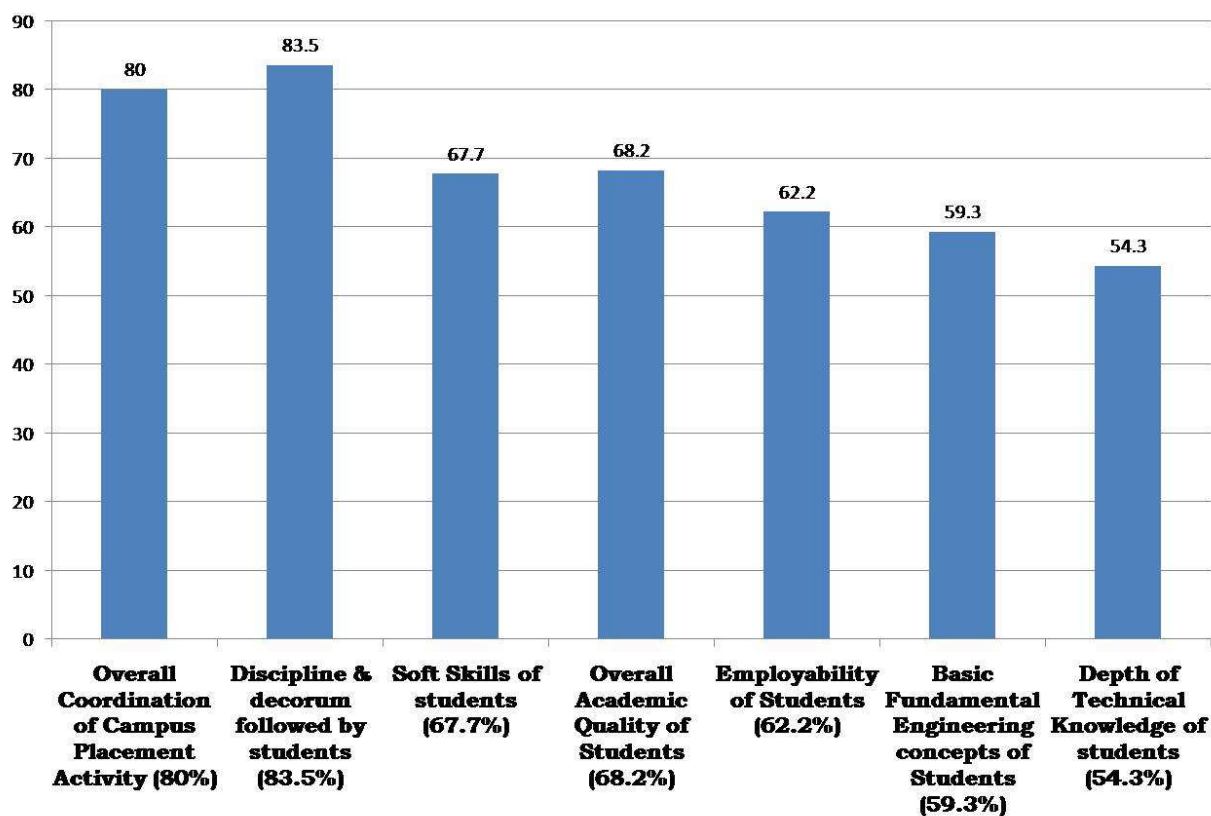


Annexure – II  
Student feedback Analysis – A.Y. 2014-15

Performance Index A.Y.2014-15				
	Sep. 2014	Nov. 2014	Feb. 2015	Apr. 2015
Chemical	80.89	78.68	78.33	79.146
Computer	82.95	81.95	82.42	83.875
DESH	81.18	81.22	81.88	83.46
Electronics	83.82	83.06	84.25	85.108
Industrial	83.12	82.77	82.88	83.694
Instrumentation	83.05	81.59	82.08	82.851
Mechanical	82.21	81.62	82.93	83.771
<b>Institute</b>	<b>82.5</b>	<b>81.55</b>	<b>82.11</b>	<b>83.13</b>



Annexure – III  
Company feedback Analysis – A.Y. 2014-15



Annexure – IV  
Academic Calendar – A.Y. 2014-15

Sr. No.	Activity	Semester I	Semester II
<b>I</b>	<b>College Re-opens on</b>	-	<b>04-01-2016</b>
<b>II</b>	<b>Welcome and Registration</b>		
1)	Director's Address to S.Y.B.Tech., T.Y. B. Tech. & Final Year B. Tech., M. Tech. – II and MCA – II and III students (alongwith FE, ME – I and MCA – I students in II <sup>nd</sup> Semester)	24-07-2015	08-01-2016
2)	Director's Address to F.Y.B.Tech., M.Tech. – I & MCA – I students in I <sup>st</sup> Semester	17-07-2015	N.A.
3)	Registration for next Semester	26-10-2015 to 31-10-2015	18-04-2016 to 23-04-2016
<b>III</b>	<b>Teaching – Learning</b>		
1)	<b>Teaching begins for all classes – UG, / PG / MCA all years</b>	20-07-2015	04-01-2016
2)	Remedial Teaching, Test 2, Project Review, Seminar Review	03-10-2015 to 15-10-2015	19-03-2016 to 01-04-2016
3)	Remedial Teaching for all classes – UG / PG / MCA all years : Before Test 2  Before End Semester Examination	03-10-2015  26-11-2015	19-03-2016  05-05-2016
4)	End of teaching for all classes	25-11-2015	04-05-2016
5)	Commencement of teaching for next semester / year for students	04-01-2016 (for Sem II)	12-07-2016 (for A.Y. 2016-17)
<b>IV</b>	<b>Examination &amp; Assessment</b>		
1)	Test 1	10-08-2015 to 24-08-2015 (*)	08-02-2016 to 22-02-2016 (*)
2)	Test 2, Project Review, Seminar Review	05-10-2015 to 15-10-2015	21-03-2016 to 01-04-2016
3)	Laboratory Course assessments, mini project assessment, seminar assessment	02-11-2015 to 07-11-2015	28-04-2016 to 04-05-2016
4)	End Semester Examination for all classes, Comprehensive Viva Voce, Major Project	27-11-2015 to 13-12-2015	06-05-2016 to 22-05-2016
5)	Central Assessment Programme (C.A.P.)	27-11-2015 to 19-12-2015	06-05-2016 to 26-05-2016

(●) As per respective admission schedule

(\*) Other than lecture slot

Sr. No.	Activity	Semester I	Semester II
<b>V</b>	<b>Breaks, Students' Activities</b>		
1)	Breaks		
	1) Diwali Break	09-11-2015 to 21-11-2015	N.A.
	2) Winter Break for students	14-12-2015 to 03-01-2016	N.A.
	3) Summer Break for students	N.A.	23-05-2016 to 11-07-2016
2)	Students' Activities		
	1) Annual Social Gathering	N.A.	26-02-2016 & 27-02-2016
	2) Vishwakarakandak	07-09-2015 to 10-09-2015	N.A.
	3) Mélange	N.A.	02-02-2016 to 05-02-2016
<b>VI</b>	<b>Holidays</b>		
	Ramjan Eid	Sat, 18-07-2015	----
	Independence Day	Sat., 15-08-2015	----
	Gokul Ashtami	Sat., 05-09-2015	----
	Ganesh Chaturthi	Thu., 17-09-2015	----
	Anant Chaturdashi Next Day	Mon., 28-09-2015	----
	Gandhi Jayanti	Fri., 02-10-2015	----
	Dassera	Thu., 22-10-2015	----
	Makar Sankranti	----	Thu., 14-01-2016
	Republic Day	----	Tue., 26-01-2016
	Shivaji Maharaj Jayanti	----	Fri., 19-02-2016
	Dhuli Vandan	----	Thu., 24-03-2016
	Gudhi Padwa	----	Fri., 08-04-2016
	Dr. Ambedkar Jayanti	----	Thu., 14-04-2016
	Ram Navami	----	Fri., 15-04-2016

The following Holidays fall on Sunday –  
27-09-2015 : Anant Chaturdashi  
01-05-2015 : Maharashtra Day

[ **PROF. (DR.) R. M. JALNEKAR** ]  
Dean – Academics and Director