SELF ASSESSMENT REPORT (SAR)

Submitted to

NATIONAL BOARD OF ACCREDITATION, NEW DELHI

By

Name of Programme : Diploma in Computer Engineering

VIDYA PRASARAK MANDAL'S POLYTECHNIC, THANE

Jnanadweepa, Thane College Campus, Thane (W) 400 601.
Maharashtra State – INDIA

Approved by All India Council for Technical Education, New Delhi,
Recognized by Directorate of Technical Education, Maharashtra State, Mumbai
Affiliated to Maharashtra State Board of Technical Education, Mumbai

Institute Code : D-3257

Vidya Prasarak Mandal's
POLYTECHNIC
(**Accredited by** : National Board of Accreditation, New Delhi*)
'**Jnanadweepa**', College Campus, Chendani, Bunder Road, Thane (w) 400 601 (M.S.)
Tel. : +91 22 2536 4494, Telefax : +91 22 2533 9872
email : vpmpoly@vpmthane.org URL : www.vpmthane.org

D. K. NAYAK
M E (Comp. Engg.), L M I S T E, M I E
Principal
email : dknayak@vpmthane.org

Ref. No. VPM / Poly / 600 / 2016 - 17

Date
25.11.2016

To,
The Member Secretary,
National Board of Accreditation,
NBCC Place, East Tower, 4th Floor,
Bhisham Pitamah Marg,
Pragati Vihar, New Delhi – 110 003, India.

Sub : Submission of SAR
Ref.: Application No. 1691-04/01/2016
Institute : Vidya Prasarak Mandal's Polytechnic Thane (W). 400 601 (MS)
Programme : Diploma in **Computer Engineering**

With reference to the subject cited above, herewith we are submitting the Self Assessment Report (SAR) of Diploma Programme in **Computer Engineering**.

The said SAR has been uploaded in the NBA website http://www.nbaind.org and in our institute website www. vpmthane.org.

The SAR copy is hereby submitted for kind consideration of Programme Assessment and Accreditation by NBA through the Peer team.

: - **Tentative Suggested dates for Peer team Visit** - :

Jan 27th – 30th, 2017
Feb 3rd – 5th, 2017
Feb 10th – 12th, 2017
Feb 17th – 19th, 2017
Feb 24th – 26th, 2017

Thanking You,

Your's Faithfully,

Prof. D. K. Nayak
Principal

Approved by   . All India Council for Technical Education, New Delhi
Recognised by   . Directorate of Technical Education, Maharashtra State, Mumbai - 400 001.
Affiliated to   : Maharashtra State Board of Technical Education, Mumbai - 400 051.
Diploma Programmes Offered : • Chemical Engineering • Electrical Power System • Industrial Electronics • Instrumentation
                            • Information Technology • Computer Engineering • Medical Electronics

PROLOGUE

About Vidya Prasarak Mandal, Thane

|| Prajwalito Dnyanamayaha Pradipaha ||

VPM Thane is an Educational Trust established in the year 1935, to encourage and give full scope of education in Thane and surrounding region for which there was limited facility during sixties. The Mandal started its first college in 1968-69 on a 13.5 acres marshy creek land gifted by the Government of Maharashtra for educational purposes. The Institutes of the Campus, enthusiastically and zealously cater annually to the basic needs of education of nearly 16,000 students from K.G to P.G through its Marathi and English Medium Schools, Arts, Commerce, Science, Law, Polytechnic, Management Studies, Information Technology Centre, Advanced Study Centre. The Campus provides State-Of-The-Art facilities to the students with the latest technologies to make them competent for the future career opportunities.

In the year 2012, VPM started an Engineering College at Velneshwar Village in Ratnagiri District for catering to the needs of rural population.

About the Polytechnic

Vidya Prasarak Mandal's Polytechnic Thane, the Self-financed Institute, was started by the Management in the year1983. Polytechnic so far has trained over 9000+ diploma holders, 1000+ Advance Diploma Students, 5000+ Certificate course students. Important features include quality academic activities implementation, extensive co-curricular activities, National Conferences, Industrial visits, In-plant Training and Value Addition Programmes. Polytechnic, its students and staff have won awards at State and National level regularly. Institute is a trust worthy partner of Affiliating body Maharashtra State Board of Technical Education, Mumbai as a Project Institute for Curriculum Revision, Faculty Training lab Manual Development, Conduct of Semester Exams, Academic Monitoring, Career Fair and

other activities. Institute has upgraded its Infrastructure, Faculty, Equipment's, and Teaching Learning process from time to time to meet changing technology needs and industry expectations.

Polytechnic Journey so far…….

- **Year of Start**   : **1983**
- **Year of First AICTE Approval**   : **1994**
- **Year of Accreditation**   : **2004**
- **Best ISTE Chapter Award**   : **2009**
- **Year of Best Polytechnic Award** : **2009, 2015**

Major Achievements

Year	Activity
1983	Polytechnic started with four Diploma Programmes – **Chemical Engineering, Electrical Power Systems, Industrial Electronics and Instrumentation**.
1987	Inauguration of **First Computer Centre** by Mr. M.G. Nayak, IAS, Deputy Secretary, Technical & Higher Education Dept., Govt. of Maharashtra.
1987	First Edition Polytechnic Magazine – **Polyzine**- Published.
1987	Foundation Stone laid for Polytechnic Buildings.
1987	**Basic Training Centre** for Trade Apprentices from Chemical Industries- NOCIL, BAYER,PIL, Herdillia, Chemicals, NRC, Savita Chemicals, Gharda Chemicals Ltd. (AOCP & MMCP) approved by Board of Vocational Education, Maharashtra.
1989	Visit of State Government Team for Polytechnic Gradation. Received **'A' Grade.**
1989	Student Chapter of **Instrument Society of America** with 33 Student Members. First ISA student Chapter in India.
1990	First Two days Seminar on **Process Control Instrumentation** Chief guest-Mr. C.S. Joshi (M.D)Ornate Chemicals Ltd.
1990	Started **Advance Diploma in Computer Software System Analysis and Applications** Course affiliated to MSBTE and Certificate Course in Computer Operation Affiliated to DVET.
1991	Felicitation of **Mr. P.S. Deodhar- President of APLAB Ltd.** for receiving the prestigious US Award **Engineering Manager** from Management Society of America.
1992	Inauguration of **Indian Society of Technical Education Chapter.** Chief guest – Prof. B.B. Chopane – Director, Technical Education, Maharashtra State.
2000	**Millennium Information Technology Exhibition** inaugurated by Hon'ble Union Minister Information Technology & Parliamentary affairs **Mr. Pramod Mahajan**.
2001	Start of Diploma in **Information Technology**.
2002	Start of Diploma in **Computer Engineering**, **Advance Diploma in Industrial Safety**
2003	Polytechnic Principal **Prof. S.S. Mujumdar** nominated as **Member of Board of**

Year	Activity
	MSBTE, Mumbai.
2004	First **NBA Accreditation** of four Programmes, w.e.f 17/3/2004 for the period of 3 years.
2004	One-day National Seminar on **Pollution of Water Bodies in Urban Area** on 8th August 2004 supported by **AICTE, New Delhi**.
2004	Start of Diploma in **Medical Electronics**.
2005	Visit of Infosys founder **Mr. N.R. Narayanamurthy** as a Key Note Speaker at the Conference Challenges to Indian Multinationals.
2005	Received **AICTE Grant of Rs. 5,00,000/- AICTE MODROBS Grant to Electrical Power System Department**
2006	**Prof. D.K. Nayak, Principal** nominated as **Member of Governing Council, Board of Apprenticeship Training Western Region, Mumbai.**
2006	**ISTE Best Project Award to Mr. Ramiz Pojee** and team for Project on Biometrix OS Defense Shell guided by **Dr. Mrs. Usha Raghavan.**
2006	Installation of **Automatic Weather Stations (AWS)**, developed and maintained by **India Meteorological Department (IMD)** Government of India.
2009	**ISTE-Narsee Monjee Award for Polytechnics in Maharashtra State** for the year 2009, for Best overall performance.
2009	**V.P.M.'s Polytechnic, Thane** received **Best ISTE-Chapter in Maharashtra-Goa for the year 2009.**
2009	**District Level Energy Park** developed with the partial grant of Rs.4.75 lakhs from **Ministry of New and Renewable Energy**, New Delhi.
2009	**Prof. D.K. Nayak, Principal** received **Fulbright-Hays Federal Assistance Award of U.S. Department of State** atSalzburg Seminar Session 463 on Greening the Minds: Universities, Climate Leadership, and Sustainable Futures, **Salzburg, Austria** for the paper title **Renewable Energy Efforts - Special Focus on reduction of Global Warming.**
2009	Start of **Advance Diploma in Energy Management & Audit**
2011	Start of **Entrepreneurship Development Cell.**
2012 & 2013	**MSBTE Letter of Appreciation for Excellent Academic Performance** in all the Diploma and Two Advance Diploma Programmes.

Year	Activity
2013	**IOSH, UK Graduate Membership Accreditation** for Advance Diploma in Industrial Safety Programme.
2014	**Prof. D.K. Nayak, Principal** received **ISTE Ranganathan Engineering College National Award** for **Best Polytechnic Principal** at the **44th ISTE National Annual convention**.
2015	Received **ISTE Narsee Monjee Student Project Award** by Ms. Sharaddha Kamble, Mr. Vishal Raut, Mr. Mohak Bengale, Mr. Divyesh Jain students of **Third year Instrumentation department** for the project **Thermostat Life Testing.**
2015	**ISTE-Narsee Monjee Award for Polytechnics in Maharashtra State** for the year 2015, for Best overall performance.
2015	Received **MSBTE Best Laboratory Award to Polytechnic Electrical Power System department.**
2015	**MSBTE Letter of Appreciation for Excellent Academic Performance.**
2016	**Mr. Soham Kulkarni of** Final year Industrial Electronics represented Polytechnic for **International Competition Mostratec, an International Science and Technology Fair** held in **Brazil** for his project **Smart Building Automatic Controller.** He also won the **ISTE Narsee Monjee National Award for Best Project** done by the Polytechnic students.
2016	**Dr. (Mrs.) G. S. Ingawale, Sr. Lecturer** received **Indian Patent** for her **Invention** in **Measurement of Potential & Chemical Kinetics of Lantadene by using immobilized Enzyme.**

ISTE Staff Awards

Year	Activity
2006	Mrs. S.S. Kulkarni received **ISTE L&T National Award Best M. Tech. Thesis in Electrical and Electronics Engineering.**
2008	**Prof. D.K. Nayak, Principal** received **Rajarambapu Patil National Award for Promising Engineering Teacher (below 50 years of age) for creative work done in Technical Education (Polytechnics)** from **Indian Society for Technical Education (ISTE), New Delhi**
2013	**Dr. Usha Raghavan**, **Head of Information Technology Department** has been conferred **ISTE U.P. Government National Award for an outstanding work done in specified areas of Engineering and Technology for the year 2013 at 43rd ISTE National Annual Convention** held at T.K.I.E.T. Warananagar, Kolhapur, Dist-Maharashtra.
2014	**Dr. Mrs. G S. Ingawale, Sr. Lecturer**, honoured with **ISTE Best Polytechnic Teacher Award** for the year 2014 for Maharashtra and Goa States in the 44th**ISTE National Annual convention**.
2014	**Mrs. Sujata M. Gupte, Controller of Examination** placed **Second Position in Zonal level ISTE Srinivasa Ramanujan Mathematics Competition** 2014-2015 and placed **Third Prize in National level**.
	Ms. Amisha Mestry, Lecturer in Industrial Electronics Department placed **Second Position** in **Zonal level ISTE Srinivasa Ramanujan Mathematics Competition** 2014-2015.
	Ms. Rizvi Fatima Ismat, Lecturer in Mathematics placed **First Position in Zonal level ISTE Srinivasa Ramanujan Mathematics Competition** 2014-2015 and placed **Fourth Prize in National level**.
2015	**Mrs. Santhi M. Laguduva. Lecturer, Industrial Electronics Department** received **ISTE – L & TNational Award for Best M. Tech Thesis in Electrical & Electronics Engineering 2015.**

Staff Paper Presentation Awards

Year	Activity
2006	**Prof. D.K. Nayak, Principal** presented paper **Socio-economic aspects of Hydrogen Energy-Indian Perspective** at the Plenary session of **International Forum Hydrogen Technologies for Energy Production** at **Moscow, Russia**Supported by **AICTE, New Delhi.**
2011	**Prof. D.K. Nayak, Principal** received **Best Paper Award** for the paper title**Renewable Hydrogen Fuelfor automobiles** at National level Conference on Emerging trends in Technology at BVIT-Navi Mumbai.

Year	Activity
2011	**Mrs. K.S. Agashe, Head of Industrial Electronics Department** received **Best Paper Award** for the paper title **Future Non-volatile Memory option in VLSI: Memristor** at Agnel Polytechnic, Vashi.
2013	**Mrs. Radhika Kamath, Lecturer, Information Technology Department** received **1st Prize** for the paper title **Grid & Distributed Networks to handle Mammoth Tasks** at National Conference on Emerging Trends in Technology.
2014	**Mrs. K.S. Agashe, Head of Industrial Electronics Department** received **Second Prize** for the paper title **Simulated Resistive switching behavior of Memristor** at BVIT, Kharghar, Navi Mumbai.
2015	**Ms. Latasha Keshwani, Lecturer, Industrial Electronics Department** received **Best Paper Award**for the paper title **Face Recognition using Radial Curves & Back Propagation Neural Network**atInternational Conference on Advances in Science and Technology. (ICAST-2015) organized by Saraswati College of Engineering, Kharghar
2015	**Mrs. S.D. Khandagale, Lecturer in Instrumentation** received **First** Prize for the papertitle **Intelligent Approach for Motor Control** atNational Conference-Vision - 2015 at BVIT, Kharghar, Navi Mumbai.

MSBTE State Level Toppers

Year	Name of the Student	Course	Percentage	MSBTE Rank
1996	Ms. Joshi Bhakti B.	Electrical Power System	79.91 %	First
1996	Mr. Oak Parag V.	Electrical Power System	79.45 %	Second
1996	Mr. Deshmane Mahesh J.	Instrumentation	80.27 %	First
1997	Mr. Bafna Milind B.	Chemical Engineering	81.96 %	First
1997	Mr. Narkar Chandan K.	Industrial Electronics	82.77 %	First
1997	Mr. Hande Tushar T.	Electrical Power System	78.82 %	Second
1997	Mr. Buddhikot Mandar D.	Electrical Power System	78.27 %	Third
1998	Mr. Inamdar Mandar S.	Electrical Power System	72.98 %	First
1999	Mr. Lamkhande Dattaram T.	Electrical Power System	77.17 %	First
1999	Mr. Girkar Jayesh H.	Electrical Power System	72.78 %	First
2001	Mr. Narkar Vyankatesh V.	Industrial Electronics	84.29 %	Sixteenth
2002	Ms. Narkar Kirti Kamlakar	Industrial Electronics	85.14	Sixteenth
2004	Mr. Zingre Shreyas R.	Electrical Power System	83.31 %	First
2005	Mr. Kher Vaibhav	Electrical Power System	87.54 %	First

Year	Name of the Student	Course	Percentage	MSBTE Rank
2006	Mr. Gokhale Kedar Dilip	Electrical Power System	87.00 %	First
2006	Mr. Rangari Rameez Anwar	Chemical Engineering	78.96 %	Second
2007	Mr. Mukadam JasimWazir	Chemical Engineering	82.00%	Second
2008	Mr. Singh Shashank S.	Information Technology	89.58%	Second
2008	Ms. Sarangdhar Grishma D.	Chemical Engineering	83.04%	Third
2009	Mr. Waghmare Abhijit Arun	Chemical Engineering	89.06 %	Second
2014	Ms. Vaity Priya Jitendra	Information Technology	91.56 %	Third

List of National Conferences organized since 2004

Date & Year	Name of Conference
8th August 2004	Pollution of Water Bodies in Urban Area
27th & 28th August 2005	Alternative Energy Sources
8th & 9th December 2006	Geo – Informatics.
3rd February 2007	Innovations in Safety, Health and Environment.
5th January 2008	Latest Trends in Nano Technology
18th October 2008	Corrosion Prevention through advanced technologies.
10th January 2009	Biometrics, RFID and Emerging Technologies for Automatic Identification
19th September 2009	Advancements in Medical Instrumentation.
10th October 2009	Safety Practices for Peace, Productivity and Profits
3rd July 2010	Broader Perspectives of Language, Thinking and Technology
23rd October, 2010	Technology – a Strategy for Safety in Infrastructure
20th August 2011	Future Power Systems for Green & Clean World
15th October 2011	Progress and Prosper through Entrepreneurs &Intrapreneurs
5th January 2013	Emerging Trends in Solar Technologies
4th January 2014	Process Safety Management
16th & 17th January 2015	Next Generation Electronics
7th February 2015	Industry Expectation from safety Managers
19th December 2015	Life Safety - Today & Tomorrow
17th December 2016	Environment, Health & Safety

Common Acronyms used in SAR	
Acronym	**Definition**
CFY	Current Financial Year
CFYm1	Current Financial Year minus 1
CFYm2	Current Financial Year minus 2
CGPA	Cumulative Grade Progressive Assessment
CIAAN	Curriculum Implementation and Assessment Norms
CT	Class Test
CUTP	Content Updating Training Program
FPADS	Faculty Performance Appraisal and Development System
MSBTE	Maharashtra State Board of Technical Education
OR	Oral
PR	Practical
PST	Practical Skill Test
PT	Progressive Theory Test
RBTE	Regional Board of Technical Education
SW	Sessional
TW	Term Work

Self Assessment Report (SAR) for

Diploma in Computer Engineering

Fresh Accreditation

SAR CONTENTS

PART A: Institutional Information

1. Name and Address of the Institution : **Vidya Prasarak Mandal's Polytechnic**

Building No. 1, 'Jnanadweepa', College

Campus, Chendani Bunder Road,

Thane (W) - 400601

Maharashtra State, India.

2. Name and Address of the : Directorate of Technical Education,

Directorate of Technical Education Mumbai, Maharashtra State,

3, Mahapalika Marg, Post Box No.1967,

Mumbai - 400001.

3. Year of Establishment : **1983**

4. Type of the Institution :

University	☐
Deemed University	☐
Autonomous	☐
Affiliated	☑ **Maharashtra State Board of Technical Education, Mumbai**
Any Other	☐

5. Ownership Status :

Central Government	☐
State Government	☐
Government Aided	☐
Self-Financing	☑ **Educational Trust**
Trust	☐
Society	☐
Section 25 Company	☐
Any Other (Please Specify)	☐

6. Other Academic Institutions of the Trust/ Society/etc., if any :

Name of the Institution	Year of Establishment	Programs of Study	Location
V.P.M's Dr. Bedekar Vidya Mandir Marathi Medium School (Aided)	1957	Junior K.G to SSC	Thane
V.P.M's K.G. Joshi College of Arts and N.G. Bedekar College of Commerce	1969	HSC, B.A, B.Com, BMM, BMS, B.Lib., M.Lib., M.A, M.Com, Ph.D., Community College	Thane
V.P.M's B.N. Bandodkar College of Science	1969	HSC, B.Sc, B.Sc(IT), M.Sc, M.Sc(IT)	Thane
VPM's Thane Municipal Corporation (TMC) Law College	1972	LLB	Thane
V.P.M's Sau. A.K. Joshi English Medium School (Unaided)	1976	Junior K.G to SSC	Thane
V.P.M's Advanced Study Centre	1996	Applied Analytical Chemistry, Regulatory Affairs, Gardening & Landscape Designing, Applications Of Statistics, Hospital administration	Thane
V.P.M's Polytechnic, Information Technology Centre	2000	ADCSSAA, Industrial Safety, Energy Management, Certificate courses -	Thane

Name of the Institution	Year of Establishment	Programs of Study	Location
		MS-CIT, Tally ERP9, Programming in C	
V.P.M's Dr. V.N. Bedekar Institute of Research & Management Studies	2005	MMS, PGDM	Thane
V.P.M's Centre for Foreign Language Studies	2008	Certificate courses in French, German, Japanese, Chinese (Mandarin)	Thane
V.P.M's Department of Defense and Strategic Studies	2008	Publications on Internationalization of Education	Thane
V.P.M's Academy of International Education and Research	2009	Educational tour to UK, Singapore, Participation in International Competitions	UK, China, Brazil, Sweden
V.P.M's Maharshi Parshuram College of Engineering	2012	Civil Engg, , Electrical Engg, Electronics and Communications, Instrumentation Engg, Mechanical Engg	Velneshwar, Ratngiri

7.   Details of all the programs being offered by the institution under consideration:

Sr. No	Program Name	Year of Commencement	Intake Capacity	Year of Change in Intake	Increase/ Decrease	AICTE Approval	Accreditation Status*
1	Diploma in Chemical Engineering (CH)	1983	60	2005	30	Yes	Yes*
2	Diploma in Electrical Power Systems (EP)	1983	30	1997	60	Yes	Yes*
3	Diploma in Industrial Electronics (IE)	1983	60	-	-	Yes	Yes*
4	Diploma in Instrumentation (IS)	1983	30	2011	60	Yes	Yes*
5	Diploma in Information Technology (IF)	2001	30	2002	60	Yes	No
6	Diploma in Computer Engineering (CO)	2002	40	2003	60	Yes	No
7	Diploma in Medical Electronics (MU)	2005	60	-	-	Yes	No

* First NBA Accreditation for 3 Years Period w.e.f. 19-03-2004

8. Programs to be considered for Accreditation vide this application

Sr. No.	Program Name
1	Diploma in Computer Engineering
2	Diploma in Information Technology
3	Diploma in Electrical power System
4	Diploma in Industrial Electronics
5	Diploma in Instrumentation

9. Total number of Employees
A. Regular*faculty and Staff

Items		CAY 15-16		CAYm1 14-15		CAYm2 13-14	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering & Technology	M	02	02	02	02	02	02
	F	12	12	12	12	12	12
Faculty in Sciences & Humanities	M	01	01	01	01	01	01
	F	02	02	02	02	02	02
Non-teaching Staff	M	19	20	21	20	20	22
	F	10	12	12	13	13	13

B. Contractual Staff

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering & Technology	M	05	05	05	05	09	09
	F	34	36	35	38	33	36
Faculty in Sciences & Humanities	M	0	0	01	01	01	01
	F	06	06	05	06	06	06
Non-teaching Staff	M	11	11	08	12	07	06
	F	12	14	10	10	09	11

10. Total number of Students

Items	CAY 15-16			CAYm1 14-15			CAym2 13-14		
	R	T	G	R	T	G	R	T	G
Total no. of boys	673	30	**703**	610	29	**639**	775	25	**800**
Total no. of girls	370	31	**401**	397	28	**425**	397	30	**427**
Total no. of students	**1043**	**61**	**1104**	**1007**	**57**	**1064**	**1172**	**55**	**1227**

- **R- Regular, T- Tuition Fees Waiver Students, G- Grand Total**

11. Contact Information of the Head of the Institution and NBA Coordinator

i. **Head of the Institution**

Name   : **Prof. D.K. Nayak**

Mobile No.   : **9004690478**

Email id   : **dknayak@vpmthane.org**

ii. **NBA coordinator**

Name   : **Dr. (Mrs.) Usha Raghavan**

Designation   : **Head Information Technology Department**

Mobile No.   : **9920735746**

Email id   : **usharagha@gmail.com**

PART B: Criteria Summary

Name of the program: Diploma in Computer Engineering

Criterion No.	Criterion	Marks/Weightage
	Program Level Criteria	
1.	Vision, Mission, Program Educational Objectives	**/ 50**
2.	Program Curriculum and Teaching –Learning Processes	**/ 200**
3.	Course Outcomes and Program Outcomes	**/ 100**
4.	Students' Performance	**/ 200**
5.	Faculty Information and Contribution	**/ 150**
6.	Facilities and Technical Support	**/ 100**
7.	Continuous Improvement	**/ 75**
	Institute Level Criteria	
8.	Student Support System	**/ 50**
9.	Governance, Institutional Support and Financial Resources	**/ 75**
	Total	**/ 1000**

CRITERION 1	Vision, Mission and Program Educational Objectives	50

1.1   State the Vision and Mission of the Institution and Department (5)

Vision and Mission of the Institute

In line with the Vision and Mission of MSBTE, V.P.M's Polytechnic has always strived for academic excellence and scientific temper. The vision and Mission of the institute are as under:

Vision and Mission of the Institute

VISION: Ensuring skill development through quality technical education.

MISSION: Imparting creative learning by Innovative Methodologies to expose the talents by the way of MSBTE Curriculum.

Mission objectives are,

M-1: Develop Technical Skills and Professional Ethics with Entrepreneurial spirit through conducive environment.

M-2: Cultivate lifelong learning skills to face challenges with Innovation**.**

Vision and Mission of the Department

VISION: Produce comprehensively trained socially responsible, innovative computer engineers of highest quality to contribute to the Nation's development.

MISSION: Provide students ambience for professional growth and lifelong learning with emphasis on sound technical knowledge and ethics.

Mission objectives are,

M-1: Provide sound technical foundation in Computer Engineering through comprehensive curriculum and application oriented learning.

M-2: Provide ambience for professional growth and lifelong learning for adapting to challenges in rapidly changing technology.

M-3: Inculcate social and ethical values.

M-4: Nurture interpersonal and entrepreneurial skills so as to develop leadership qualities in information industry's diverse culture.

1.2   State the Program Education Objectives (PEOs) (5)

PEO1 - Develop a positive attitude towards lifelong learning and succeed in industry or higher education.

PEO2 - Apply the principles of Computer Engineering to identify and solve real world problems.

PEO3 - Excel in professional career, exhibit leadership qualities with ethics and soft skills.

PEO4 - Pursue higher education, research or entrepreneurship.

PEO5 -.Engage in professional development and adapt to emerging technologies.

1.3 Indicate where and how the Vision, Mission and PEOs are published and

   disseminated among the stakeholders (10)

   Vision and Mission are published and disseminated among the stakeholders through

- **Institute website: http://www.vpmthane.org/polywebnew/index.html**

- On the college and departmental pages

- Displayed on the departmental and library notice boards

- Displayed on the Departmental files/Term Works/ E-mails/ Project Reports/Newsletters

- Published in the departmental proceedings of seminars/ symposiums

1.4 State the process for defining the Vision and Mission of the Department and PEOs

   of the program. (15)

- The Principal along with HOD and with the active participation of core faculty members develop the vision and mission statement of the department in alignment with Vision and Mission of the Institute.

- These statements are discussed further among faculty members before finalization.

- The expectations of MSBTE are taken into consideration .The MSBTE, while framing the curriculum, takes the expectations of Industry & Academia to match the global needs. Accordingly the Vision, Mission & PEOs are formulated.

- These suggestions are then approved in the Polytechnic committee meeting by the chairman of Vidya Prasarak Mandal, Thane.

- The final Vision and Mission are displayed.

Process for defining Department Vision and Mission
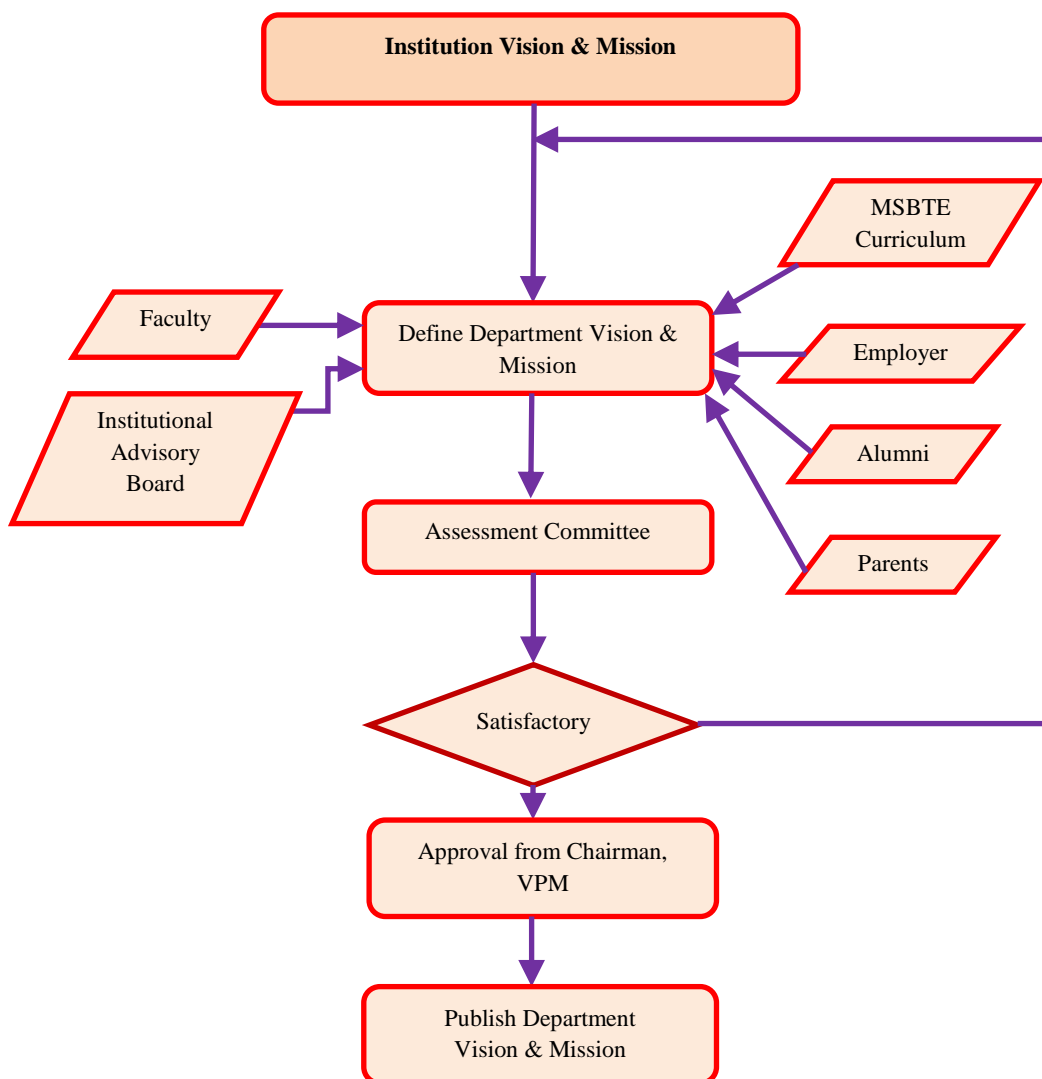
Process involved in defining the PEOs:

The Programme Educational Objectives (PEOs) are actually the broad statements of the objectives for which the programme is run. In the first place, these objectives should help in fulfilling the mission of the department. Secondly, the students graduating from the programme are expected to lead a fruitful and meaningful life in the society by being useful in its progressive development. Thus it is necessary that these objectives should be in consonance, to the extent possible, with the current research scenario in the relevant field of engineering and with the needs of the relevant industry. The research scenario is best judged by the faculty members through research publications. The industry needs are gauged through the feedback, mostly verbal, received when the students go for industrial training. The alumni who have gone to industry or to institutes of high reputation are able to reflect whether the objectives are adequate.

STEP-1: The needs of the Nation and society are identified through scientific publications, industry interaction and media.

STEP-2: Taking the above into consideration, the PEOs are established by the Core Committee of the department.

STEP-3: The PEOs are communicated to the alumni and their suggestions are obtained.

STEP-4: The PEOs are communicated to all the faculty members of the department and their feedback is obtained.

STEP-5: The PEOs are then put to the Board of Studies of the department for final approval.

Process for establishing and revising Program Educational Objectives (PEOs)

```
College                                              Society
Mission &
Vision
                          Core
                          Committee
Faculty
                                                     Industry

Alumni
```

```
        Is                          Are
        college                     Department
        Mission                     Mission &
                                    Vision full
                                    filled?
                                                     NO

Necessary              NO                            Necessary
Modification                                         Modification


                      YES              YES


                 Finalizing PEO's
```
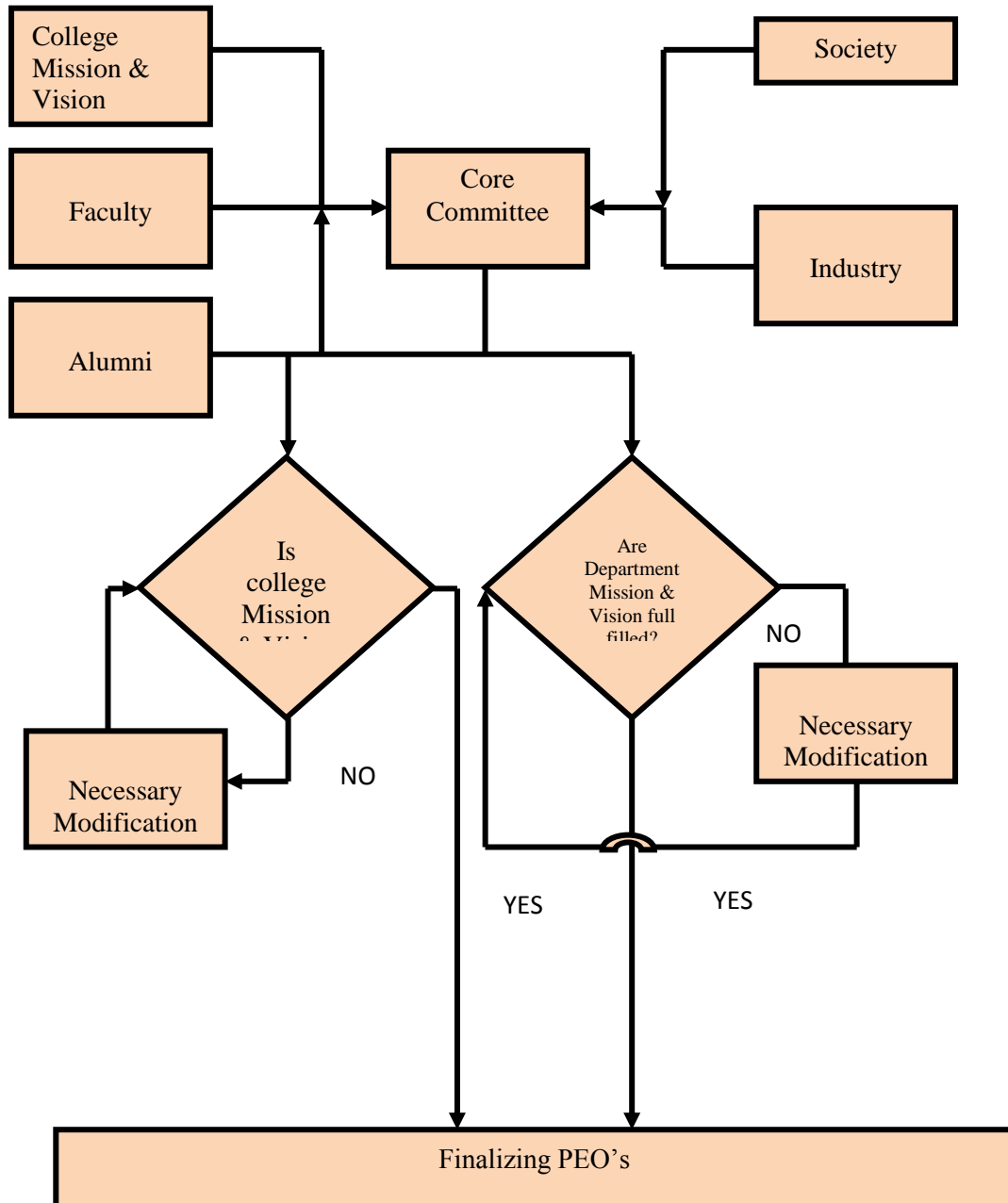
1.5 Establish consistency of PEOs with Mission of the Department.(15)

The table below shows the correlation of PEOs with the departmental Mission.

PEO/M	M1: Sound technical foundation in Computer Engineering.	M2: Ambience for professional growth and lifelong learning.	M3: Inculcate social and ethical values.	M4: Nurture interpersonal and entrepreneurial skills.
PEO1: Develop a positive attitude towards lifelong learning and succeed in industry or higher education.	3	2	2	3
PEO2: Apply the principles of Computer Engineering to identify and solve real world problems.	3	3	3	3
PEO3: Excel in professional career, exhibit leadership qualities with ethics and soft skills.	2	2	3	3
PEO4: Pursue higher education, research or entrepreneurship.	3	3	2	2
PEO5: Engage in professional development and adapt to emerging technologies.	3	3	3	2
Total	14	13	13	13

Justification:

PEO Statements	M1	M2	M3	M4	Justification
PEO1	3	2	2	3	• (Mission 1) strongly supports PEO1 to embed a strong foundation in Computer Engineering to succeed in industry or higher education. • (Mission 2) moderately support to achieve PEO1, as objective is to achieve professional by adapting to challenges in rapidly changing technology. • With strong ethical standards to succeed in industry or higher education (Mission2) moderately helps in inculcating social and ethical values. • (Mission 4) highly supports to achieve PEO1 for interpersonal and entrepreneurial skills.
PEO2	3	3	3	3	• (Mission 1) strongly support to achieve PEO2, as objective is to be able to solve real world problems using sound technical knowledge in Computer Engineering. • (Mission 2) strongly supports PEO2, as professional growth can only be achieved by adapting to challenges in rapidly changing technology • Strong ethical and social values (Mission 3) will help in achieving success in solving real world problems. (PEO 2) • Development in leadership qualities through interpersonal and entrepreneurial skills (Mission 4) can be achieved with strong support of core knowledge of Computer Engineering (PEO 2)
PEO3	2	2	3	3	• Moderate support of technical knowledge (Mission 1) helps in exceling in professional skills

PEO Statements	M1	M2	M3	M4	Justification
					(PEO 3) • PEO 3 can be achieved through moderately adapting changing technologies. • Strong bond between Mission 3 and PEO 3 helps in excelling in professional career. • Nurturing interpersonal and entrepreneurial skills (Mission 4) is necessary to achieve profession growth.
PEO4	3	3	2	2	• Strong support technical knowledge (Mission 1) will help in achieving success in higher education or research or entrepreneurship. • Strong bonding between adapting challenges in rapidly changing technology (Mission 3) can lead to success in higher education, research or entrepreneurship. • Moderate bond is necessary to develop leadership qualities(Mission 4) to succeed in higher education, research or entrepreneurship
PEO5	3	3	3	2	• Strong foundation of technical knowledge (Mission 1)leads to professional development. • Excellent ambience for professional growth(Mission 2) can help in adapting emerging technologies • Strong ethical and social values (Mission 3)can help in achieving professional growth. • Moderate interpersonal and entrepreneurial skills (Mission 4) are necessary for professional development.

CRITERION 2	Program Curriculum and Teaching – Learning Processes	200

2.1 Program Curriculum (50)

2.1.1 State the process used to identify extent of compliance of the Board curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as mentioned in Annexure I. Also mention the identified curricula gaps, if any (30)

The curriculum given by Maharashtra State Board of Technical Education is revised every 5 years taking feedback from all the stakeholders like Industry, Alumni, Institutes, Subject experts etc. It is based on System's approach. This takes care of the curricular gaps present in the previous curriculum & thus minimizes the gaps.

However, with growing technology, it is very difficult to satisfy all the needs of the industry through curriculum. To identify these gaps following approach is used.

- A subject teacher does a thorough study of the curriculum. After discussion with other subject teachers a common platform is created wherein the link between various subjects is discussed. The curricular and knowledge gaps are identified and the strategy to overcome these gaps is arrived at.

- Recent advances in the industry are identified with discussion between visiting faculties and departmental staff. The discussion also highlights the need for students to have knowledge of these advancements. Accordingly, symposiums, Seminars, Workshops, Training programmes are arranged.

- A review of curriculums offered by autonomous institutes is taken into consideration and the necessary contents are added in the seminars.

Process used for identifying curricular gaps

Formation	→	Notification	→	Implementation
• The Program outcomes & program specific outcomes are prepared taking annexure I into consideration. • Allocation of course curriculum to faculty • Identification of links between various courses • Enumerate the identified curricular gaps		• Recent advances, identified curricular gaps are discussed with visiting faculty		• Seminars • Workshops • Value Added courses • Training • Technical Quiz • Paper Presentations

Identified Curricular Gaps

A. Certain gaps like knowledge of Op-amps which is not covered in the curriculum but are required for further curriculum. They are taught in the regular class by allocating additional hours.

B. Personality is the most important virtue of the engineer. Though some aspects of personality development are covered in subjects such as Professional practices, Behavioral sciences, other essential skills such as stress management, interview techniques, importance of team work etc. are covered by inviting experts in respective fields.

C. Integrated Development Environment such as NetBeans or eclipse, needed for final year project are taught by conducting extra sessions.

D. Latest Developments in Computer engineering fields such as Cloud Computing, Android are covered by conducting extra sessions

2.1.2 Contents beyond the Syllabus (20)

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present
1	A	Conducted lecture on Op-Amps	2015-16 2014-15 2013-14	Mrs. Suhasini Shukla	All SY students
2		Conducted Lecture on 8085 Explanation	2015-16 2014-15 2013-14	Mrs. Dipali Bhiole Mrs. Swati Tawde	All SY students
3		Digital Certificate Creation	2015-16 2014-15 2013-14	Mrs. Sonali Bhavsar	All TY students
4		Sort Command, How to Use Geditor	2015-16 2014-15 2013-14	Mrs. Swati Tawde Ms. Sneha Shete	All TY students

Academic Year (2015-16)

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
		Training Programs				
1	B	Technical Writing	5/9/2015	The Institution of Engineers	1	PO2,PO7, PO9,PO10 PSO1,PSO4
2	D	SAP-01 Training Program	10/12/2015 to 16/12/2015	Ms. Zareen Shaikh SAP Trainer at SAP India Private Limited	34	PO1,PO2, PO3,PO4, PO8,PO9, PO10, PSO1, PSO3,PSO4

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
3	D	Embedded System using Arduino	9/12/2015 & 11/12/2015	Mr. Amol Sakhalkar Proprietor of Digel Systems	33	PO1,PO2, PO3,PO4, PO10,PSO2, PSO3,PSO4
4	D	Android Technology	13/12/2015 to 20/12/2015	Mr. Aniket Suryarao, Training head, Techknow	25	PO1,PO2, PO3,PO4, PO8,PO9, PO10,PSO1, PSO3, PSO4
5	D	Dot Net	13/12/2015 to 20/12/2015	Ms. Sheetal Pawade Web Designer & Developer Accenture Pvt Ltd.	12	PO1,PO2, PO3,PO4, PO8,PO9, PO10,PSO1, PSO3, PSO4
	Guest Lectures					
1	D	Computer Security	4-7-2015	Mrs. Prachi Nitnaware, Lecturer, TMC Law College	77	PO5,PO7, PO10 PSO1,PSO3, PSO4
2	D	Computer Security	17-07-2015	Mrs. Prachi Nitnaware Lecturer, TMC Law College	80	PO5,PO7, PO10 PSO1, PSO3,PSO4
3	B	Effective Communication	24-07-2015	Mrs. Sheetal Telange, Lecturer, IIT'ANS PACE Science	80	PO8,PO9, PO10 PSO1,PSO2, PSO3,PSO4

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
				Junior College Dadar		
4	D	VFX Technology	1/8/2015	Miss. Savita Nikam, Marketing Manager, Red Academy, Thane	80	PO1,PO2, PO3,PO4, PO8,PO9, PO10 PSO1,PSO3, PSO4
5	D	Java and PHP Topics	1/8/2015	Mr. Umesh Singh, Software Engineer, Citius IT Solutions	77	PO1,PO2, PO3,PO4, PO5,PO7, PO8,PO10 PSO1,PSO2, PSO3,PSO4
6	D	Computer Data Processing	19/08/2015	Miss. Priyanka More, Network Support Engineer, Tikona Internet Services	80	PO1,PO2, PO3,PO4, PO5,PO7, PO8,PO10 PSO1,PSO2, PSO3,PSO4
7	B	Need for Counseling	27/08/2015	Mrs. Akshata Sonpataki, Counselor, K.G Joshi College of Arts and Commerce	61	PO5,PO7, PO9
8	B	Need for Counseling	7/1/2016	Ms. Akshata Sonpataki, Counselor,	61	PO5,PO7, PO9

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
				K.G Joshi College of Arts and Commerce		
9	A	Financial Management	13/02/2016 &20/2/2016	Ms. Shaikh Nisha Mohd Javed, Claims Advocate, Willis Towres, Watson	77	PO1,PO5, PO6 PSO4
10	B	Benefits of Yoga	18/2/2016	Mr. Anil G. Biyani, Entrepreneur	40	PO5

Academic Year (2014-15) (Guest Lectures)

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
Training Programs						
1	D	Embedded System using Arduino	19/9/2014 to 21/9/2014 and 26/9/2014	Mr.Amol Sakhalkar Proprietor Digel Systems	20	PO1,PO2,PO3,PO4,PO10 PSO2,PSO3, PSO4
2	D	SAP01 Training Program	27/11/2014 to 2/12/2014	Ms. Zareen Shaikh SAP Trainer at SAP India Private Limited	21	PO1,PO2,PO3,PO4,PO8, PO9,PO10 PSO1,PSO3, PSO4
Demo Lecture						
3	D	Latest development	19/7/2014	Mr. Krunal Padh Marketing	133	PO4,PO6, PO10 PSO2

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
		in printing technology 3D Printing		Manager		
Guest Lectures						
4	A	Advances in Networking	23/08/2014	Mr.Durvesh Kadam,, Network Engineer	133	PO1,PO2,PO3 ,PO4,PO8, PO10 PSO1
5	D	Grid Computing	20/12/2014	Mrs. Radhika Kamat, Lecturer, IF dept	133	PO1,PO2,PO3 ,PO4,PO8, PO10 PSO1
6	D	Cloud Computing	3/1/2015	Mr.Avinash Adsul (Server Manager at Orange Pvt LTD)	133	PO1,PO2,PO3 ,PO4,PO8, PO10 PSO1
7	A	Project Management	6/1/2015	Prof. V. S. Bhakre, Honorary Professor	61	All POs and PSOs
8	B	Motivation	15/1/2015	Prof. V. S. Bhakre, Honorary Professor	61	All POs and PSOs
9	D	Artificial Intelligence	31/1/2015	Mr.Abhishek Ghosh, Developer, TCS	72	PO1,PO2,PO3 PO4,PO5,PO7 ,PO8,PO10 PSO1,PSO2, PSO3,PSO4
10	D	SAP	31/1/2015	Mr.Vikrant Joshi, ABAP, Consultant, SAP	61	PO1,PO2,PO3 ,PO4,PO8, PO9,PO10 PSO1,PSO3, PSO4

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
11	D	Motivating students for Entrepreneurship	2/3/2015	Mr. Pratik Kate, Entrepreneur	61	All POs and PSOs

CAYm2 (2013-14) (Guest Lectures)

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
1	D	Information Security	28/08/2013	Mr. Harpreet Khattar/ Mr. Tanish Narang	60	PO5,PO7, PO10 PSO1, PSO3,PSO4
2	A	Industrial Networking	29/06/2013	Mr. Vivek Koshti, Project Manager, Jacobs Engineering	60	PO1,PO2, PO3,PO4, PO8, PO10 PSO1
3	D	Business process Model	20/7/2013	Ms. Richa Tripathi, Software Engineer, MphasiS Services	60	All POs and PSOs
4	B	Stress Management	17/7/2013	Ms. Vedavati Paranjape, Counselor, K.G. Joshi College.	73	PO5, PO7
5	A	Role of Computer in the field of Instrumentation	21/09/2013	Mrs. Vaishali. A. Joshi, H.O.D. IS Department	60	PO1,PO2, PO3,PO4, PO5,PO8, PO10 PSO1,PSO2, PSO3,PSO4

Sr. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
6	B	Preparing your CV	1/2/2014	Mr.Vivek Koshati, Project Manager, Jacobs Engineering	60	PO5, PO7, PO9
7	B	Motivation & their case studies	27/01/2014	Mr.Bhakre V.S Honorary Professor	73	All POs and PSOs
8	A	SCADA	18/01/2014	Mrs. Smita Khandagale, Lecturer, IS Department	73	PO1,PO2, PO3,PO4, PO6,PO7, PO8,PO10 PSO1

2.2 Teaching Learning Process (150)

2.2.1. Describe Processes followed to ensure/improve quality of Teaching & Learning (25)

Processes implemented to ensure/improve quality of Teaching & Learning
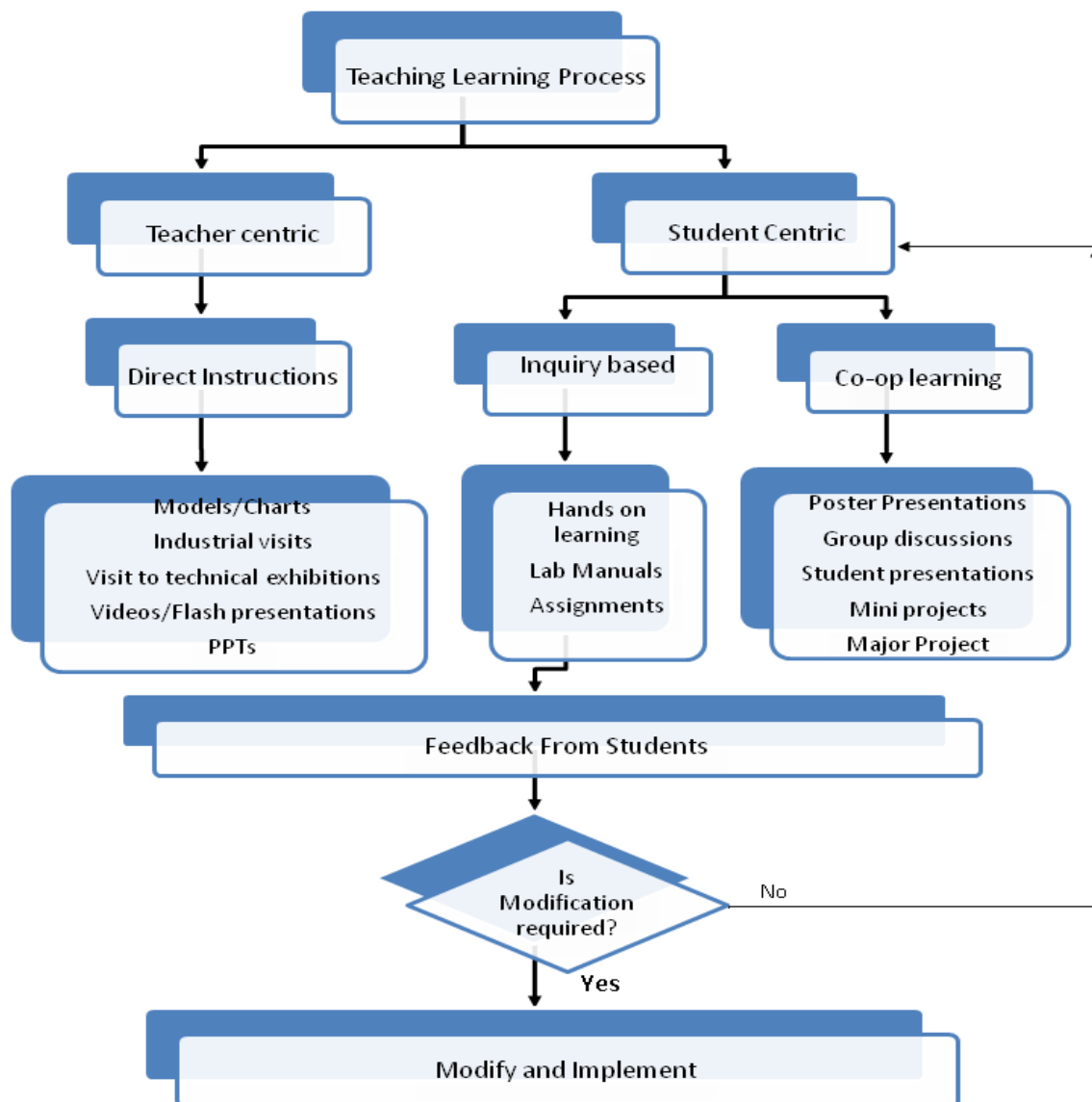
- Academic Calendar of MSBTE is followed by preparing a time table. Teaching/ Laboratory plan is prepared for each subject theory as well as practical.

- MSBTE provides lab manuals to ensure quality of practical training. All the students are given MCQs to solve which are based on each experiment.

- To get real world problem experience, the MSBTE curriculum includes mini projects in various subjects in second year and project in Third year.

- Presentations based on various topics are prepared by faculty members and are used for better concept understanding.

- Students prepare models and charts under faculty guidance.

- Subjects like Development of life skills include role play activities.

- Value added courses like .Net, Android and Microcontroller Programming (Arduino), SAP are conducted by professionals which helps the students in their final year project.

- Free book bank facility is provided for toppers and similar facility is extended to other students for nominal fees.

- Spoken tutorials, a project Of Ministry of Human Resource Development in collaboration with IIT Bombay & MSBTE are provided for better understanding of the curriculum based knowledge and the students are certified.

- Students are encouraged to participate in competitions like Technical Paper Presentation, Poster Presentation, Power Point, Quiz.

- Interested students are selected for Entrepreneurship Development Cell to give opportunity for the development of Entrepreneurial skills.

- Remedial classes/ Problem solving sessions are conducted for weak students. Counseling and mentoring through various sessions are organized to motivate the students.

Course Delivery Methods

- **Class room Lectures** - The main delivery method for the courses is lecture interspersed with discussion. This helps in the obtaining a sound understanding of the course fundamentals, design and implementation issues, etc.

- **Presentations**- The abstract concepts difficult to imagine are presented through power point presentations and animation tools to impart insight into the subject. Presentations also illustrate ideas and concepts in graphics form. Video presentations effectively communicate the working of actual engineering solutions and their impact.

- **Laboratory session**- Laboratory work demonstrates how theory can be verified by experiments through interpretation of results. Experiments are normally done in groups so students learn to work in teams.

- **Simulations or demo** - In some courses, the design and experimentation issues are also discussed in the form of demo or simulations. The students are thus exposed to different tools for implementation and experimentation.

- **Assignments**- Writing assignments deepens thinking and increases students' engagement with course material. Good writing assignments prompt students to think more deeply about what they are learning. Some assignments carry a bigger problem nearer to reality that cannot be done in the classroom. Group assignments help them to work effectively in a team.

- **Project** - Micro projects, Mini projects and Final year projects are carried out by a group of students under the guidance of faculty wherein students apply the knowledge of all related courses in providing hardware/software solutions and present demonstrable product to a panel of supervisors.

- **Comprehensive Viva Voce** - The Viva Voce is an important mode of assessment, providing an opportunity for students to demonstrate their knowledge, approach and understandings with the examiners. They are not just an assessment of the student's

performance but usually an opportunity for the external examiner to get feedback from the students on the performance of the department.

- **Seminar** - The students collect knowledge related to a topic and present it in a technical report and oral lecture comprehensively.

- **Industrial Visits** - Industrial visits are arranged to get the students acquainted with industrial environment and work ethics.

- **E- Learning Resources**- Videos and E-learning material are used for giving exposure to domain expertise of the faculties from various reputed institutes like NPTEL, Spoken Tutorial.

Course Delivery Method	PO1.	PO2	PO3.	PO4.	PO5.	PO6.	PO7.	PO8.	PO9.	PO 10	PSO1.	PSO2.	PSO3.	PSO4.
Class Room Lecture	√			√	√	√	√	√		√	√	√	√	
Labrotary Sessions	√	√		√	√	√		√	√	√	√	√	√	√
Assignments	√				√	√	√			√	√		√	
Projects	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Seminars					√	√				√				
Visits	√				√	√	√			√		√		
Notes/ E learning Materials					√					√		√	√	
PR/OR	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Teaching Learning Process
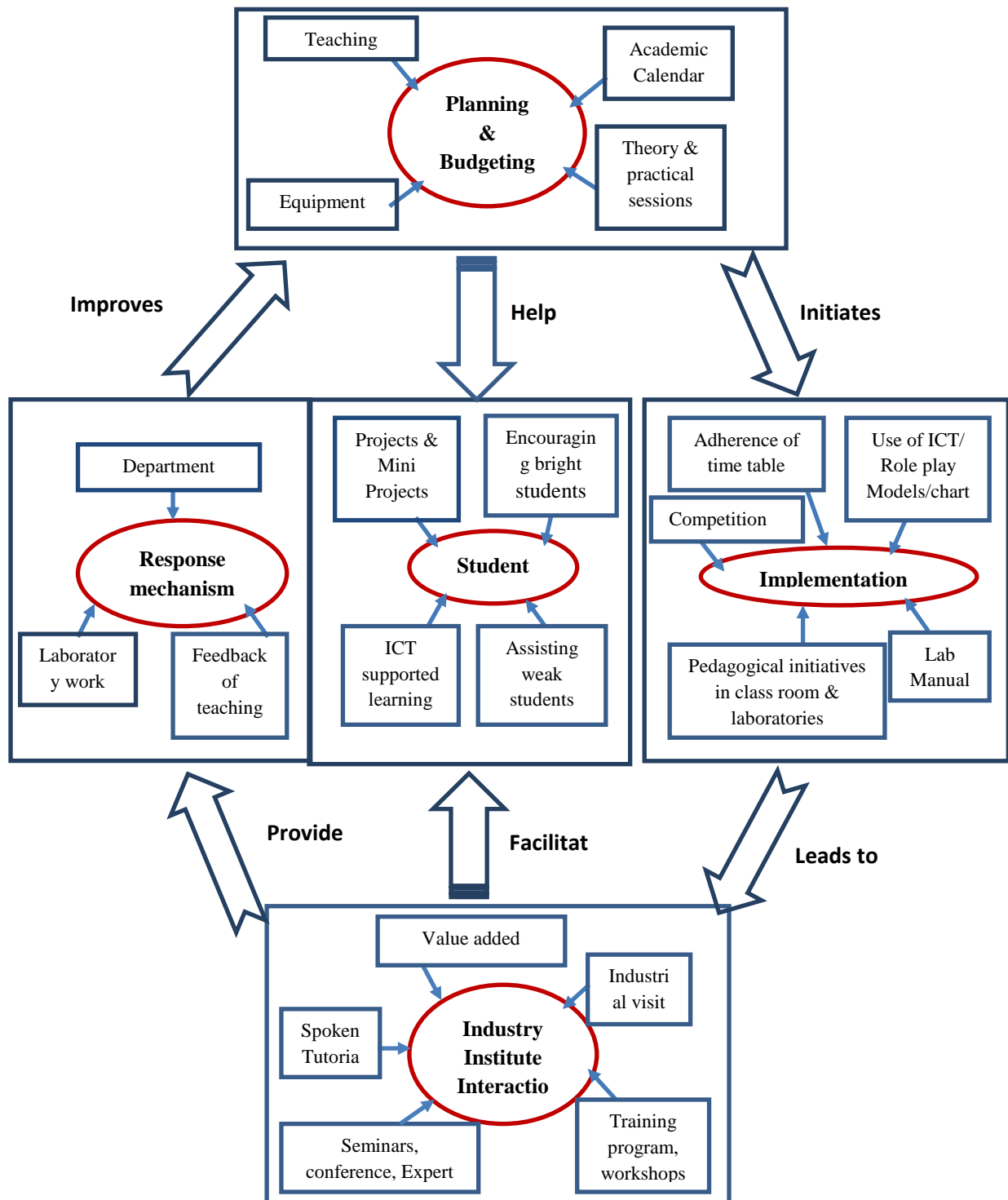
2.2.2. Initiatives to improve the quality of semester tests and assignments (15)

Sr. No	Parameter	Initiative Taken	Skills Developed
1.	End Semester Exams	• Chapterwise Question Bank • Previous Years Paper Solving • Problem Solving Sessions	• Preparation of exam becomes easy • Repeated questions can be easily attempted • Problem solving becomes easy. • Minimize Guessing • Focuses on ability to apply.
2.	Class Test	• Structured questions are asked • Questions contain verbs such as distinguish, explain, describe	• Recall factual knowledge • Organize the knowledge • Present the knowledge in logical sequence. • Enhance the ability to analyze two different situations. • Make the students understand the similarity between 2 systems.
3.	Practical Sessions	• Questions based on experiments in the manual • MCQs provide immediate result.	• . Improves cognitive ability • Provides reliable measurement of scores • Provides to the students a technique for self-evaluation.
4.	Assignments	• Chapter wise assignments	• Improves the understanding of concepts • Helps in preparation of exams

2.2.3. Quality of Experiments (15)

I. The laboratory manuals are learning resources prepared by subject experts from various institutes affiliated to MSBTE under the guidance of educational consultants. They include

a)   Student activities

b)   Questions for confirmation of learning

c)   Conclusion

d)   Application of each experiment

These attributes are relevant to curriculum objectives

I.   Similar methods/procedures are followed for the subjects for which laboratory manuals are not provided by MSBTE.

Sr. No	Parameter	Initiative taken	Skills Developed
1.	Practical Sessions	Use of Laboratory Manuals	• Hands-On Skills • Knowledge about application of each experiment • Relation between Theory and Practicals • Debugging and Trouble Shooting • Communication Skills • Motor Skills
		Continuous assessment	
		Circuit Making, Demo Kits	
		MCQ solving, Orals	
2.	Additional Practices beyond Curriculum	Experiments Mini Projects Additional Programs	• Design code for real life problems • Debugging and Testing • Application oriented Thinking

Mapping of Experiment with COs

One sample shown here

Course Name:CO1G SEMESTER: FIRST		MSBTE Course Code: ECH (17103) TYPE OF ASSESSMENT: TW/OR/PR: PR									
Experiment No.	Title	Type of Experiment			CO1	CO2	CO3	CO4	CO5	CO6
		Study	Performance	Mini Project						
1	Know your Chemistry laboratory and prepare sample solutions of different concentrations.	√			√					
2	Determine the basic radical (metallic ion) and acidic radical (non-metallic ion) by qualitative analysis of given salt solution no-1.		√			√				
3	Determine the basic radical (metallic ion) and acidic radical (non-metallic ion) by qualitative analysis of given salt solution no-2.		√			√				
4	Determine the basic radical (metallic ion) and acidic radical (non-metallic ion) by qualitative analysis of given salt solution no-3.		√			√				
5	Determine the basic radical (metallic ion) and acidic radical (non-metallic ion) by qualitative analysis of given salt solution no-4.		√			√				
6	Determine the basic radical (metallic ion) and acidic radical (non-metallic ion) by qualitative analysis of given salt solution no-5.		√			√				
7	Calculate the electrochemical equivalent of copper by electrolysis of copper sulphate solution using copper electrodes.		√					√	√	
8	Determine pH value of given solutions by using pH paper, universal indicator and pH meter.		√	√					√	
9	Prepare Phenol formaldehyde resin used in manufacturing of Bakelite plastic.		√	√						√

2.2.4. Quality of Students Projects and Report Writing (25)
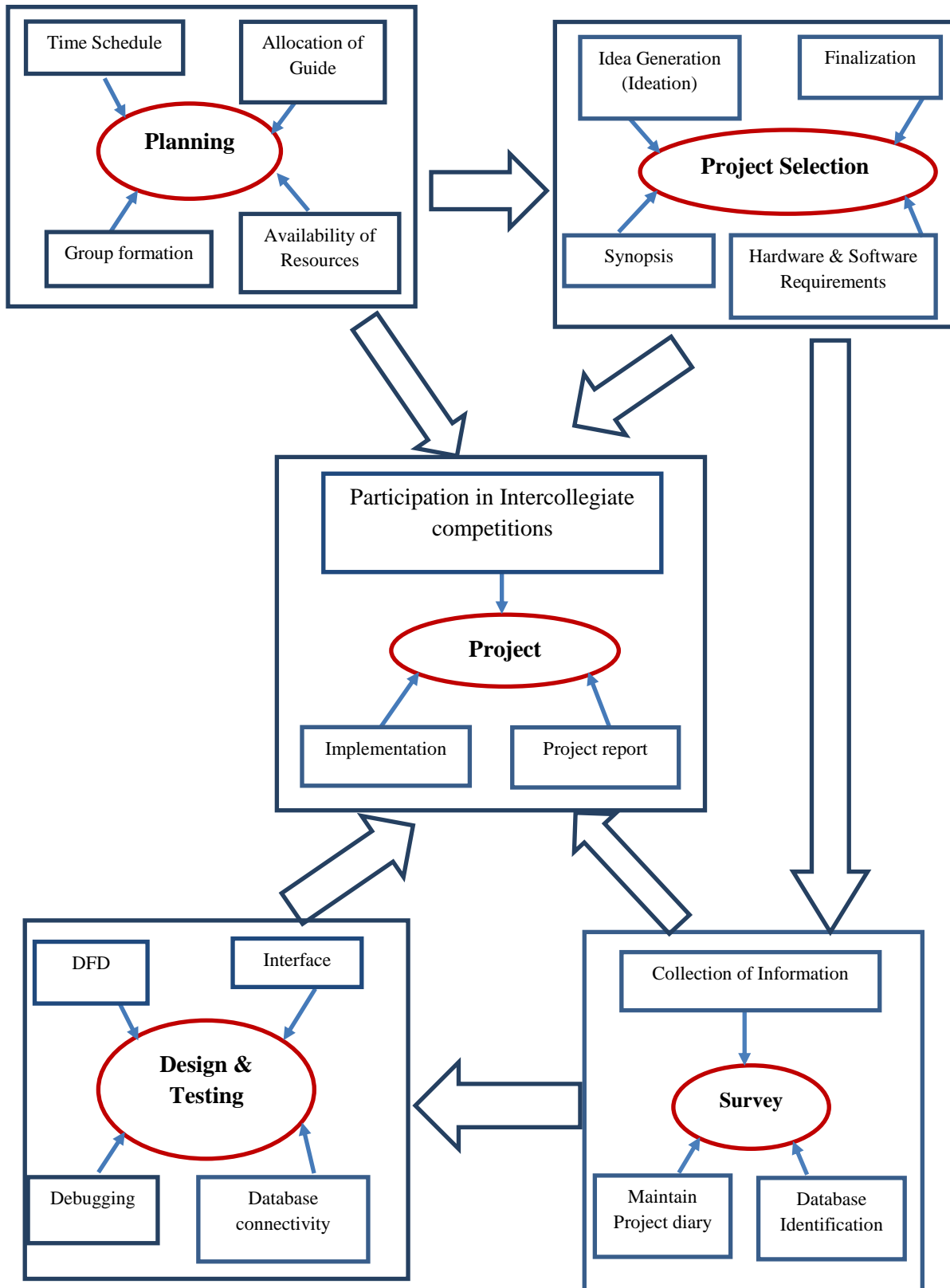
- Every final year student undertakes project which is spread over a period of two semesters.

- A group of 4-5 students is formed in the 5th semester and a faculty is allotted as a guide to these groups.

- Groups select multiple topics in their area of interest and considering latest trends/demand in the industry or benefit for the society.

- Under the guidance of faculty, the group finalizes the project topic.

- Session on Technical Writing is conducted for the students.

- The student performs literature survey and maintains a diary showing the weekly updates on the project.

- Project Synopsis is prepared and submitted at the end of the Semester.

- The logical and physical design of the project is done in the sixth semester during the allotted hours in the time table with the guidance of respective guides, faculty.

- The students are guided on the principles of software testing to get industrial quality project.

- An exhibition of the projects developed is organized in the last week of February and best projects are recognized and sent for various other inter collegiate competitions.

- A final project report is prepared with proper documentation in design and installation procedures.

List of Projects

Academic Year (2015-16)

Sr. No	Project Name with Guide	Hardware interfacing and software	Pure Software	Project Guide	POs										PSOs			
					PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
1	Automatic Time Table Generator		√	Mrs. S.K. Shukla	2	3	3	3	3	2	1	2	3	3	3	3	3	1
2	Automatic Unauthorized parking detector	√		Mrs. Deepali Bhole	2	3	3	3		2	1	2	3	3	3	3	3	1
3	Railway Accident Avoiding System	√		Mrs. Sonali Bhavsar	2	3	3	3	3	2	2	2	3	3	3	3	3	1
4	Ask me Solution		√	Ms. Manisha Bhole	1	2	3	3	3	2	1	2	3	3	3	3	3	_
5	Java online exam system		√	Mrs. S.K.Shukla	2		3	3	3	2	1	2	3	3	3	3	3	1
6	Density Based on traffic signal system		√	Mrs. Swati Tawade	2	2	3	3	3	2	1	2	3	3	3	3	3	1
7	Intelligent Helmet	√		Ms. Priyanka Dongre	2	2	3	3	3	2	1	2	3	3	3	3	3	1
8	women safety jacket	√		Ms Sneha Shete	2	3	3	3	3	2	1	2	3	3	3	3	3	1
9	Android Attendance		√	Ms. Poonam Wavare	2	2	3	3	3	2	1	2	3	3	3	3	3	1
10	Automated Pay & Park system	√		Ms. Sushma Borkar	2		3	3		2	1	2	3	3	3	3	3	1
11	Event Management System		√	Mrs. Deepali Bhole	1	2	3	3	3	2	1	2	3	3	3	3	3	1
12	One Time Password		√	Mrs. Sonali Bhavsar	1	3	3	3	3	2	1	3	3	3	3	3	3	1
13	Advance Networking Monitoring	√	√	Ms. Manisha Bhole	2	3	3	3	3	2	1	2	3	3	3	3	3	1
14	Emotion Analysis		√	Ms. Sushma Borkar	2	3	3	3	3	2	1	3	3	3	3	3	3	1
15	Lab monitoring System		√	Ms. Priyanka Dongre	2	2	3	3		2	1	2	3	3	3	3	3	1
16	Digital Notice Board	√		Mrs. Swati Tawade	2	2	3	3	3	2	3	2	3	3	3	3	3	1
17	Tours & Travels Application with webpages		√	Ms.Poonam wavare	2	3	3	3	3	2	2	3	3	3	3	3	3	1
18	Battery Saver Application		√	Ms. Sushma Borkar	2	3	3	3	3	2	3	3	3	3	3	3	3	1
19	X-Terminator	√		Ms Sneha Shete	2	2	3	3	3	2	2	2	3	3	3	3	3	1
20	Hand gesture Controlled ROBOT	√		Ms Sneha Shete	2	2	3	3	3	2	2	3	3	3	3	3	3	1

Academic Year (2014-15)

Sr. No	Project Name with Guide	Hardware interfacing and software	Pure Software	Project Guide	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
1	Alchohol n Sleep warning system	√		Mrs. Suhasini Shukla	2	2	3	3	3	2	3	3	3	3	3	3	3	2
2	WINVAULT		√	Mrs. Suhasini Shukla	2	3	3	3	3	2	3	3	2	3	3	3	3	2
3	Women Security	√		Mrs. Sonali Bhavsar	2	3	3	3	3	2	3	3	2	3	3	2	3	2
4	Computer based voting system		√	Mrs. Dipali Bhole	3	3	2	2	3	2	2	2	2	2	3	3	3	–
5	Sreet Light automation system	√		Ms. Sneha Shete	2	3	2	2	3	2	3	3	3	3	3	3	1	–
6	Student Tutorial Using Java/.Net		√	Mrs. Swati Tawade	3	3	1	1	3	2	2	2	2	2	1	3	3	1
7	Online Exam System		√	Ms.Priyanka Dongre	3	3	1	1	3	2	1	2	2	2	1	3	3	–
8	Ensuring data storage security		√	Mrs. Sonali Bhavsar	2	3	2	2	3	2	2	3	2	2	2	3	1	–
9	Touch 2 pay		√	Mrs. Dipali Bhole	2	3	1	1	3	2	1	3	2	2	2	3	1	–
10	Security System at Toll Plaza	√		Ms. Manisha Bhole	2	3	2	2	3	2	2	3	2	2	2	2	1	–
11	Shop Management Software Using JAVA		√	Mrs. Swati Tawade	3	3	1	1	3	2	1	2	2	2	2	3	3	–
12	Inventory management system		√	Ms. Sushma Borkar	3	3	1	1	3	2	1	2	2	2	2	3	2	–
13	Control soil moisture by using GSM technology	√		Ms. Manisha Bhole	2	3	3	3	3	2	3	3	3	3	3	3	3	–
14	Bi-Language Software (Bi-sparch Software)	√		Ms. Sushma Borkar	2	3	2	2	3	2	1	3	2	2	2	3	2	–
15	Hospital Management		√	Ms.Priyanka Dongre	3	3	1	1	3	2	1	2	1	2	1	3	2	–
16	Digital Imaging & Communication in medicine		√	Ms. Poonam Wavare	2	3	1	1	3	2	1	3	1	2	2	3	2	–

Academic Year (2013-14)

Sr. No	Project Name with Guide	Hardware interfacing and software	Pure Software	Project Guide	POs										PSOs			
					PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PS O1	PS O2	PS O3	PS O4
1	U.N.I.C.S Unique Non-duplicable Identification Card System	√		Mrs. Suhasini Shukla	3	2	2	3	2	2	3	3	3	3	3	3	3	1
2	Advanced Web Browser-Awance		√	Mrs. Suhasini Shukla	3	2	2	3	2	2	_	2	3	3	2	3	2	1
3	LPG Gas Detector Using GSM Module	√		Mr. Pratik Kadam	3	1	2	3	2	2	3	2	3	3	2	3	2	1
4	Blood Bank Management System		√	Ms. Monali Patil	2	1	2	3	1	2	1	2	3	3	2	3	2	1
5	Remote Desktop Management		√	Mrs.Sonali Bhavsar	2	2	2	3	1	2	1	2	3	3	2	3	2	1
6	Online D2H		√	Mrs. Dipali Bhole	2	1	1	3	1	2	_	1	2	3	2	3	1	_
7	Anti Phishing		√	Ms. Monali Patil	2	2	_	3	1	2	_	1	2	3	2	3	2	_
8	Garbage Compaction	√		Ms. Sushma Borkar	2	1	1	3	3	2	3	3	3	3	2	3	2	1
9	NFC Based Video Attandance System	√		Mrs. Samrudhi pitkar	2	2	1	3	2	2	_	2	3	3	2	3	2	1
10	ECG Monitoring System	√		Ms. Suhasini Gunjal	2	2	1	3	2	2	_	2	3	3	2	3	2	1
11	Density Based Clustering		√	Mrs. Sonali Bhavsar	2	2	1	3	2	2	_	2	2	3	2	3	2	_
12	Computer Controlled A.C. Devices	√		Mrs. Dipali Bhole	2	2	1	3	1	2	_	2	2	3	2	3	2	1
13	Automatic Gateless Toll Tax Collection with SMS Updation	√		Mrs. Samrudhi Pitkar	2	1	2	3	2	2	_	2	2	3	2	3	2	1
14	Library Management		√	Ms. Manisha Bhole	1	1	1	3	1	2	_	1	2	3	2	3	1	1
15	Traffic Control Using RFID	√		Ms. Suhasini Gunjal	3	2	2	3	2	2	_	2	2	3	2	3	2	1
16	Inventory Control System		√	Ms. Sushma Borkar	1	2	1	3	2	2	_	2	2	3	2	3	2	1
17	Online Examination		√	Ms. Manisha Bhole	1	2	1	3	2	2	_	1	2	3	2	3	1	1
18	OS Optimization		√	Ms. Manisha Bhole	2	2	2	3	2	2	_	2	2	3	2	3	2	1
19	Hospital Management System		√	Mr. Pratik Kadam	1	2	1	3	2	2	_	2	2	3	2	3	2	1
20	Job Portal		√	Ms. Monali Patil	2	2	2	3	2	2	_	2	2	3	2	3	2	1
21	Steganography using RSA Algorithm	√		Ms. Sushma Borkar	2	2	1	3	2	2	_	1	2	3	2	3	2	1

2.2.5. Industry Interaction and Industry Internship/Training (30)

Academic Year (2015-16)

Sr. No	Program Details	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs & PSOs
Industry Based Training					
1	SAP-01 Training Program	10/12/2015 to 16/12/2015	Ms.Zareen Shaikh (SAP Trainer at SAP India Pvt. Ltd.)	34	PO1,PO2,PO3,PO4 ,PO8,PO9,PO10 PSO1,PSO3,PSO4
2	Embedded System using Arduino	9/12/2015 & 11/12/2015	Mr.Amol Sakalkar (Proprietor of Digel Systems)	33	PO1,PO2,PO3,PO4 ,PO10 PSO2,PSO3,PSO4
3	Android Technology	13/12/2015 to 20/12/2015	Mr. Aniket Suryarao Training head, Techknow	25	PO1,PO2,PO3,PO4 ,PO8,PO9,PO10 PSO1,PSO3, PSO4
4	Dot Net	13/12/2015 to 20/12/2015	Ms. Sheetal Pawade Web Designer cum Developer Accenture Pvt Ltd.	12	PO1,PO2,PO3,PO4 ,PO8,PO9,PO10 PSO1,PSO3, PSO4
5	Technical Writing	5/9/2015	The Institution of Engineers	1	PO5, PO7, PO9
Guest lectures by Industry professionals					
1	Computer Security	4-7-2015	Mrs. Prachi Nitnaware Lecturer, TMC Law College	77	PO5,PO7, PO10 PSO1, PSO3,PSO4
2	Computer Security	17-07-2015	Mrs. Prachi Nitnaware, Lecturer, TMC Law College	80	PO5,PO7, PO10 PSO1, PSO3,PSO4
3	Effective Communication	24-07-2015	Mrs. Shital Telange Lecturer, IIT PACE Sci College.	80	PO8,PO9,PO10 PSO1,PSO2,PSO3, PSO4

Sr. No	Program Details	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs & PSOs
4	VFX Technology	1/8/2015	Miss. Savita Nikam, Marketing Manager, Red Academy Thane	80	PO1, PO2, PO3, PO4, PO7, PO8, PO9, PO10 PSO1,PSO2,PSO3, PSO4
5	Java and PHP Topics	1/8/2015	Mr. Umesh Singh, Software Engineer, Citius IT Solutions	77	PO1,PO2,PO3,PO4 ,PO5,PO7,PO8, PO10 PSO1,PSO2,PSO3, PSO4
6	Computer Data Processing	19-08-2015	Miss. Priyanka More, Network Support Engineer, Tikona Internet Services	80	PO1,PO2,PO3,PO4 ,PO5,PO7,PO8, PO10 PSO1,PSO2,PSO3, PSO4
7	Counseling	27-08-2015	Mrs. Akshata Sonpataki Counselor, K.G Joshi College of Arts and Commerce	61	PO5,PO7,PO9
8	Counseling	7/1/2016	Ms. Akshata Sonpataki Counselor, K.G Joshi College of Arts and Commerce	61	PO5,PO7,PO9
9	Financial Management	13/02/2016 &20/2/2016	Ms. Shaikh Nisha Mohd Javed Claims Advocate, Willis Towres,	77	PO1, PO5,PO6 PSO4

Sr. No	Program Details	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs & PSOs
			Watson		
10	Benefits of Yoga	18/2/2016	Mr. Anil G. Biyani Entrepreneur,	40	PO5
Industrial visit					
1	Environmental awareness	16/1/16	EnviroVigil	83	PO5, PO6 PSO 4
2	Hardware and Networking Study	5/3/16	V.P.M'S POLYTECHNIC Server Room	83	PO1,PO2,PO3,PO4,PO7,PO8,PO10 PSO1,PSO2,PSO3, PSO4
3	Industrial Equipment and working	12/3/16	Godrej and Boyce Pvt. Ltd	77	PO1,PO2,PO3,PO4,PO7,PO8,PO10 PSO1,PSO2,PSO3, PSO4

Academic Year (2014-15)

Sr. No	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
Industrial Training					
1	Embedded System using Arduino	19/9/2014 to 21/9/2014 and 26/9/2014	Mr. Amol Sakhalkar Proprietor Digel Systems	20	PO1,PO2,PO3, PO4,PO10 PSO2, PSO3,PSO4
2	SAP01 Training Program	27/11/2014 to 2/12/2014	Ms.Zareen Shaikh SAP Trainer at SAP India Private Limited	21	PO1,PO2,PO3, PO4,PO8,PO9, PO10 PSO1,PSO3,

Sr. No	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
					PSO4
Demo Lecture					
1	Latest development in printing technology 3D Printing	19/7/2014	Mr. Krunal Padh, Marketing Manager	133	PO4, ,PO6,PO10 PSO2
Guest Lectures					
2	Advances in Networking	23/08/2014	Mr. Durvesh Kadam, Network Engineer	133	PO1,PO2,PO3, PO4PO7,PO8, PO10 PSO1
3	Grid Computing	20/12/2014	Mrs. Radhika Kamat, Lecturer, IF Dept, V.P.M's Polytechnic	133	PO1,PO2,PO3, PO4PO7,PO8, PO10 PSO1
4	Cloud Computing	3/1/2015	Mr.Avinash Adsul, Server Manager at Orange Pvt LTD	133	PO1,PO2,PO3, PO4,PO7,PO8, PO10 PSO1
5	Project Management	6/1/2015	Mr. Bhakre V.S, Honorary Professor	61	All POs and PSOs
6	Motivation	15/1/2015		61	All POs and PSOs
7	Artificial Intelligence	31/1/2015	Mr. Abhishek Ghosh, Developer TCS	72	PO1,PO2,PO3, PO4,PO5,PO7, PO8,PO10 PSO1,PSO2, PSO3,PSO4
8	SAP	31/1/2015	Mr. Vikrant Joshi,	61	PO1,PO2,PO3,

Sr. No	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
			ABAP Consultant, SAP		PO4,PO8,PO9, PO10 PSO1, PSO3,PSO4
9	Motivating students for Entrepreneurship	2/3/2015	Mr. Pratik Kate, Entrepreneur	61	All POs and PSOs
Industrial Visits					
1	Campus Networking	8/10/15 to 10/1/15	V.P.M's college of Engineering Velneshwar	23	PO2,PO4,PO5, PO6,PO7,PO8, PO10 PSO1, PSO2,PSO3, PSO4
2	Environment awareness	31/1/15	Keshav Srushti	73	PO5, PO6 PSO4
3	Telecommunication	26/2/15	Doordarshan, Worli Mumbai	64	PO4,PO5,PO7, PO8,PO10 PSO1,PSO2, PSO3
4	Industrial Equipment and working	28/2/215	Godrej and Boyce Pvt. Ltd	62	PO1,PO2,PO3, PO4, PO7, PO8, PO10 PSO1, PSO2,PSO3, PSO4

Academic Year (2013--14)

Sr. No	Action Taken	Date-Month-Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
Guest Lectures					
1	Information Security	28/08/2013	Mr. Harpreet Khattar/ Mr. Tanish Narang	60	PO1,PO2,PO3,PO4,PO5,PO7,PO8, PO9,PO10 PSO1,PSO2,PSO3, PSO4
2	Industrial Networking	29/06/2013	Mr. Vivek Koshti, Project Manager Jacobs Engineering	60	PO1,PO2,PO3,PO4,PO7,PO8,PO10 PSO1
3	Business process Model	20/7/2013	Ms. Richa Tripathi, Software Engineer, MphasiS Services	60	All POs and PSOs
4	Stress management	17/7/2013	Ms. Vedavati Paranjape Counselor, K.G Joshi College of Arts and Commerce	73	PO5,PO7
5	Role of Computer in the field of instrumentation	21/09/2013	Mrs. Vaishali. A. Joshi, H.O.D IS Department, V.P.M's Polytechnic	60	PO1,PO2,PO3,PO4,PO5,PO7,PO8, PO10 PSO1,PSO2,PSO3, PSO4
6	Preparing your CV	1/2/2014	Mr. Vivek Koshti, Project Manager,	60	PO5,PO7, PO9

Sr. No	Action Taken	Date- Month- Year	Resource Person with Designation	No. of students present	Relevance to POs& PSOs
			Jacobs Eng.		
7	Motivation & their case studies	27/01/2014	Mr. Bhakre V.S Honorary Professor	73	All POs and PSOs
8	SCADA	18/01/2014	Mrs. Smita Khandagale Lecturer, IS Department, V.P.M's Polytechnic	73	PO1,PO2,PO3,PO4 ,PO5,PO7,PO10 PSO1
Industrial Visits					
1	Environment awareness	25/1/14	Nisarg Paryatan	68	PO5, PO6 PSO4
2	Industrial Equipment and working	11/2/15	Godrej and Boyce Pvt. Ltd	84	PO1,PO2,PO3,PO4 ,PO7,PO8,PO10 PSO1,PSO2,PSO3, PSO4
	Hardware and Networking Study	28/2/14	V.P.M'S Polytechnic, Server Room	83	PO1,PO2,PO3,PO4 ,PO7,PO8,PO10 PSO1,PSO2,PSO3, PSO4

2.2.6. Information Access Facilities and Student Centric Learning Initiatives (15)

- **Department Library:** The department has books on all the subjects related to the curriculum and also some books which will help them gain extra knowledge. These books are issued to the students.

- **Book Bank:** The College has book bank facility. The books are issued to the students at a nominal cost in each semester.

- **Access to other Libraries in Campus:** The students also have access to libraries from other college in the campus.

- **Videos**: Multimedia has many kinds of data such as text, audio, images, animation, video and interactive content. These make the learning complementary with the existing tools. With video, the students has more control over the information they receives and it provides additional opportunity for deeper learning by being able to stop, rewind, fast-forward, and replay content as many times as needed.

- **PPTs**: PPT can help teachers to teach a subject point wise so as to make the learning more efficient. Power Point has become very popular because it's easy to learn, widely available, easy to understand the subject.

- **CDS/DVDS:** CD/DVDs contain large amount of data in the form of video, documents and -audio. Students can take back up from computer and store it in DVD.

- **Transparencies:** Transparencies are mainly used for drawing figures which are then placed on an overhead projector for display.

- **E-Notes**: e Notes helps students to complete assignments and study for exams. E notes are sent to the students by emails.

- **Spoken tutorials (MOOCs):** It is MHRD project under IIT-B which helps the students to get certified in various programming subjects through tutorials and videos.

- **Website-Notes**: Websites includes educational video tutorials, instructional lectures, do-it yourself guides, self-help tutorials, interactive presentations, animated explanations and many more. It helps students to develop learning skills. Many websites are suggested by MSBTE in Curriculum.

Sr. No	Facilities	Year	Subjects	Students Benefitted	Remark
1	Multimedia/ Flash/ Video	TY	NMA	All TY Students	Shown to students during lectures
		SY	DTE, CHM, CNE	All SY Students	
2	PPTs	TY	PP, PROJECTS	All TY Students	Shared with Students
		SY	DTE, CHM, CNE	All SY Students	
		FY	BEL, W/S,	All FY Students	
3	CD/DVD	TY	NMA, OS, PROJECT	All TY Students	Shared with Students
		SY	OS,	All SY Students	
		FY	CMF, W/S	All FY Students	
4	Transparencies	TY	SEN	All TY Students	Shown to students during lectures
		SY	CHM, CNE, DTE	All SY Students	
5	E- Notes	TY	SEN, JPR, OS, CS, AJP,STE	All TY Students	E Notes are mailed to the students by faculty
		SY	CHM, CNE, RDBMS, DTE	All SY Students	
		FY	PIC	All FY Students	
6	Spoken tutorial	TY	Java	All TY Students	Videos shown during practical, Exam conducted at semester end
		SY	C++ Programming	All SY Students	
		FY	C Programming	All FY Students	
7	Websites	TY, SY, FY	All Subjects	All Students	Internet facility is made available to all students on all PCs

2.2.7. New Initiatives for embedding Professional Skills (15)

For developing specialized skill development including communication, professional and core employability skills classes on Professional Practices, Development of Life Skills & Entrepreneurship Development are conducted.

Professional Practice and Entrepreneurship Development are trans-disciplinary academic department focused on flexible work-related learning within higher education.

Professional Practice subject provides a platform to students to undergo activities which will enable them to develop self-confidence.In this subject a student is needs to use the knowledge and skills within a practical environment. Practicing in a professional manner requires that individuals have skills, knowledge, values and attitudes appropriate to their role and responsibility within the setting. In addition, it requires regular reflection upon practice and engagement in supported, ongoing professional development.

Professional Practice is enhanced in several fields-

- **Effective communication** is more than just exchanging information withothersIt involves teamwork, decision making, and problem solving. It enables thestudents to communicate even negative or difficult messages without creating conflict or destroying trust.

It is achieved in several ways-

- Interacting with peers to share thoughts

- Prepare notes on given topic.

- Conducting Seminars

- Conducting Group Discussions

- Guest lectures on Communication Skills

- Preparing report on industrial visits, expert lectures

- Organizing Paper Presentations

- **Industrial training** provided to the students after 4th and 6th Semester helps the students in gaining knowledge. It also allows them to work on real world problem and develops confidence in them.

- **Personality development** means enhancing and grooming one's outer and inner self to bring about a positive change to your life. Each individual has a distinct persona that can be developed, polished and refined. This process includes boosting one's confidence, improving communication and language speaking abilities, widening ones scope of knowledge, developing certain hobbies or skills, learning manners.

  It is achieved in several ways-

1. Conducting guest lectures on **Personality development**

2. Organizing Seminars

3. Guest lectures on **Stress Management**

- **Information search**-Everybody can become more effective when it comes to searching of information. Research suggests that metacognitive strategies including planning, monitoring and self-regulating actions could enhance individual search in research database. Students are provided with different topics related to different fields of study.

- **Industrial visits -**Industrial visit has its own importance in a career of a student who is pursuing a professional degree. It is considered as a part of college curriculum.

  Industrial visits provide students an insight regarding internal working of companies. We know theoretical knowledge is not enough for making a good professional career. With an aim to go beyond academics, industrial visit provides student a practical perspective on the world of work. It provides students with an opportunity to learn practically through interaction, working methods and employment practices.

  - **Workshops –**Several workshops are conducted to improvise students in different aspects such as

1. Workshops on Entrepreneurship development skills (RYLA)

2. Workshops on recent ongoing Computer Engineering related topics.

- **Mentoring --**Mentoring is to support and encourage people to manage their own learning in order that they may maximize their potential, develop their skills, improve their performance and become the person they want to be. Mentoring is a powerful personal development and empowerment tool. It is an effective way of helping people to progress in their careers and is becoming increasing popular as its potential is realized.

- **Counseling** is about talking to someone who understands what depression is and what can help. Counselors are professionally trained to work with people on their personal and emotional issues, including depression and suicide. Counseling offers an opportunity to talk confidentially to someone impartial, so students are free to explore your true feelings and be supported without judgment.

2.2.8. Co-curricular & Extra Curricular Activities (10)

A. Co-Curricular Activities:

Academic Year (2015-16)

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
1	**Value Added Courses/ Work Shops**	SAP-01 Training Program	Ms. Zareen Shaikh SAP Trainer at SAP India Private Limited	34
		Embedded System using Arduino	Mr. Amol Sakalkar Proprietor of Digel Systems	33
		Android Technology	Mr. Aniket Suryarao Training head, Techknow	25
		. Net	Ms. Sheetal Pawade ,Web Designer cum Developer Accenture Pvt. Ltd.	12
		Technical Writing	The Institution of Engineers	1

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
2	**Competitions / Certifications**	Web Page Designing Competition	CO Department	83
		Competition on Mini project Java	CO Department	77
		Competition on Mini project VB	CO Department	83
		Competition on Mini project OOP	CO Department	83
		Competition on " Best out of Waste"	CO Department	83
3	**Guest Lectures**	Computer Security	Mrs. Prachi Nitnaware Lecturer, TMC Law College	77
		Computer Security	Mrs. Prachi Nitnaware, Lecturer, TMC Law College	80
		Effective Communication	Mrs. Sheetal Telange Lecturer, IIT'ANS PACE Science Junior College Dadar	80
		VFX Technology	Miss. Savita Nikam, Marketing Manager, Red Academy Thane	80
		Java and PHP Topics	Mr. Umesh Singh, Software Engineer, Citius IT Solutions	77
		Computer Data Processing	Miss. Priyanka More, Network Support Engineer, Tikona Internet Services	80
		Counseling	Mrs. Akshata Sonpataki Counselor, K.G Joshi College of Arts and	61

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
			Commerce	
		Counseling	Ms. Akshata Sonpataki Counselor, K.G Joshi College of Arts and Commerce	61
		Financial Management	Ms. Shaikh Nisha Mohd Javed Claims Advocate, Willis Towres, Watson	77
		Benefits of Yoga	Mr. Anil G. Biyani Entrepreneur,	40
4	**Visits**	Environmental awareness	EnviroVigil	83
		Hardware and Networking Study	V.P.M'S POLYTECHNIC Server Room	83
		Industrial Equipment and working	Godrej and Boyce Pvt. Ltd	77
5	**Project Exhibition / Hardware Exhibition**	Hardware and Networking Exhibition	CO Department	83
		Project Exhibition	CO Department	77

Language Lab Activities

Sr. No.	Name of Event	Name of Student
1	Poster Making Competition	Ms. Amruta Pandhare
2		Mr. Shubham Phansekar
3		Mr. Kartik Konje
4		Mr. Sahil Patil
5		Ms. Samiksha Gupta
6		Ms. Kajal Jadhav
7		Ms. Renuka Chaudhari

Sr. No.	Name of Event	Name of Student
8		Ms. Siddhi More
9	Extempore Speech	Mr. Shubham Phansekar
10		Ms. Samiksha Gupta
11		Mr Kartik Chipde
12	Presentation	Ms. Shruti Patil and Ms. Bhagyashree Bhoir
13		Mr. Vishvesh Pande and Mr. Anzal Shaikh
14		Ms. Samiksha Gupta Ms. Kajal Jadhav Ms. Renuka Chaudhari Ms. Siddhi More
15	Skit Competition	Ms. Arati Chougle Ms. Manasi Bhor Ms. Shivani Patil Ms. Mayuri Patil Ms. Anjali Birhade
16		Ms. Dipali Nikam Ms. Sheetal Dhavale
17		Ms. Shruti Patil Ms. Bhagyashree Bhoir Ms. Amruta Pandhare

Intercollegiate Competitions

Sr. No	Type of Competition	Venue	Level	Names Of Participants	Topic
1	Essay Writing	Dharma Raiya Mahila Sanghantno	National	Ms. Meghana Shinde	Women's safety
2				Ms.Chitra Gore	Cuent Education System
3				Ms.Sneha Gaikwad	Women's safety
4	Language	RAIT, Nerul	National	Ms Sonal Kuchekar,	Breaking the Da

Sr. No	Type of Competition	Venue	Level	Names Of Participants	Topic
5	Competition			Ms Gunjan Chaudhari	Vinci Code
6	Paper Presentation Competition	D.Y. Patil ,Nerul	National	Mr.Nikhil Anam, Ms. Richa Yadav	Cyborg
7	Quiz	VPM'S Polytechnic, Thane	State	Mr. Ambarish Bivalkar	ISTE Quiz Competition
8.	Tech Quiz	VPM'S Polytechnic, Thane	State	Mr. Ambarish Bivalkar	Tech Quiz Intercollege Competition
9.	Tech talk Paper presentation	VPM'S Polytechnic, Thane	State	Ms Sonal Kuchekar, Ms .Trisha Sawant	Internet of things
9.	Second National level Project exhibition cum Poster presentation	Universal College of Eng.Vasai	National	Mr .Rugved Jage,Mr Suhas Jadhav,Ms Dakshana Rathod,Mr Pratik Pawar	Hybrid LAN Monitoring & controlling system
10.	National level Project exhibition cum Poster presentation	Universal College of Eng.Vasai	National	Ms. Shivanee Bhor,Ms. Bhagyashree Kekare,Ms. Ankita Bhandvilkar,Ms. Pooja Chaskar	Intelligent Helmet
11.	National level Project exhibition cum Poster presentation	Universal College of Eng.Vasai	National	Ms. Reshma Lihe,Ms.Shaddha Gite,Ms. Shivali Vadhavkar,Ms. Chitra Gore	Automatic Unauthorized parking detector

Sr. No	Type of Competition	Venue	Level	Names Of Participants	Topic
12.	National level Project exhibition cum Poster presentation	Universal College of Engg. Vasai	National	Mr. Udit Pevekar, Mr. Nikhil Anam ,Mr. Pratik Wavhal, Mr Prathamesh Prabhu, Mr. Vijay kengale	Automated Pay & Park System
13.	Expansion Project Competition Organized by Silicon Sea & PELRC	VPM'S Polytechnic, Thane	Final	Mr .Rugved Jage, Mr Suhas Jadhav, Ms Dakshana Rathod, Mr Pratik Pawar	Hybrid LAN Monitoring & controlling system

Academic Year (2014-15)

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
1	**Value Added Courses/ Work Shops**	Embedded System using Arduino	Mr. Amol Sakalkar Proprietor of Digel Systems	33
		SAP01 Training Program	Ms. Zareen Shaikh SAP Trainer at SAP India Private Limited	34
2	**Competitions**	Web Page Designing Competition	CO Department	72
		Competition on Mini project Java	CO Department	62
		Competition on Mini project VB	CO Department	72
		Competition on Mini project OOP	CO Department	72

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
		Competition on " Best out of Waste"	CO Department	72
3	**Demo Lecture**	Latest development in 3D printing technology	Mr. Krunal Padh, Marketing Manager	133
4	**Guest Lectures**	Advances in Networking	Mr. Durvesh Kadam, Network Engineer	133
		Grid Computing	Mrs. Radhika Kamat,Lecturer, IF Dept, V.P.M's Polytechnic	133
		Cloud Computing	Mr.Avinash Adsul (Server Manager at Orange Pvt LTD)	133
		Project Management	Mr. Bhakre V.S Honorary Professor	62
		Motivation	Mr. Bhakre V.S Honorary Professor	62
		Artificial Intelligence	Mr. Abhishek Ghosh, Developer TCS	72
		SAP	Mr. Vikrant Joshi, ABAP Consultant, SAP	62
		Motivating students for Entrepreneurship	Mr. Pratik Kate, Entrepreneur	62
	Visits	Campus Networking	V.P.M's college of	22

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
			Engineering Velneshwar	
		Environment awareness	Keshav Srushti	73
		Telecommunication	Doordarshan, Worli Mumbai	62
		Industrial Equipment and working	Godrej and Boyce Pvt. Ltd	62
	Project Exhibition/ Hardware Exhibition	Hardware and Networking Exhibition	CO Department	73
		Project Exhibition	CO Department	62

Intercollegiate Competitions

Sr. No	Type of Competition	Venue	Level	Names Of Participants
1.	Poster Presentation	VPM'S Polytechnic, Thane	Final	Ms Rakshanda Shaikh, Ms Snehal Kale, Ms. Aparna Pottabathini, Ms.Prapti Chandanshive
2	Poster Presentation	VPM'S Polytechnic, Thane	Final	Ms. Samiksha Salune ,Ms. Dashana Rathod Ms. Vrushali Chavan, Ms. Priyanka Musale.
3	Paper Presentation	D.Y.Patil,Nerul	National	Ms. Roshani Kavishwar, Ms. Pooja More
4				Mr. Adwait Samant, Mr.Omkar Naik
5	Essay Writing Competition	TMC School, Khopat Thane	District Level	Ms. Chitra Gore, Ms. Shital Dabade, Ms. Sneha Gaikwad, Ms. Meghana Shinde

Sr. No	Type of Competition	Venue	Level	Names Of Participants
6.	Project Competition	RAIT ,Nerul	National	Ms. Roshani Kavishwar, Ms. Pooja More, Ms. Pradnya Savant, Ms. Saily Kambale
7.	National Conference On "Next Generation Electronics"	VPM'S polytechnic, Thane	National	Ms.Aparna Pottabathini, Ms.Prapti Chandanshive
8	Tech talk (Nanotechnology In Computing Field)	VPM'S Polytechnic, Thane	State	Ms. Roshani Kavishwar, Ms. Pooja More
9	Tech Talk(Compiler & Interpreter)	VPM'S Polytechnic, Thane	State	Ms. Pradnya Savant
10	Tech Talk(Cyborgs)	VPM'S Polytechnic, Thane	State	Mr.Manan Shah
11	Tech Talk(Big Data)	VPM'S Polytechnic, Thane	State	Ms. Richa Yadav

Academic Year (2013-14)

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
1	**Competitions**	Web Page Designing Competition	CO Department	60
		Competition on Mini project Java	CO Department	73
		Competition on Mini project VB	CO Department	60
		Competition on Mini project OOP	CO Department	60
		Competition on " Best out of Waste"	CO Department	60

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
2	**Guest Lectures**	Information Security	Mr. Harpreet Khattar/ Mr. Tanish Narang	60
		Industrial Networking	Mr. Vivek Koshti, Project Manager Jacobs Engineering	60
		Business Process Model	Ms. Richa Tripathi, Software Engineer, MphasiS Services	60
		Stress Management	Ms. Vedavati Paranjape Counselor, K.G Joshi College of Arts and Commerce	73
		Role of Computer in the field of Instrumentation	Mrs. Vaishali. A. Joshi, H.O.D IS Department, V.P.M's Polytechnic	60
		Preparing your CV	Mr. Vivek Koshti, Project manager, Jacobs Engineering	60
		Motivation & their case studies	Mr. Bhakre V.S Honorary Professor	73
		SCADA	Mrs. Smita Khandagale Lecturer, IS Department, V.P.M's Polytechnic	73
3	**Visits**	Environment Awareness	Nisarg Paryatan	68
		Industrial Equipment and working	Godrej and Boyce Pvt.Ltd	84
		Hardware and Networking Study	V.P.M'S Polytechnic, Server Room	83
4	**Project**	Hardware and	CO Department	73

Sr. No	Activity	Topic	Resource Person/Industry	Beneficiaries
	Exhibition/ Hardware Exhibition	Networking Exhibition		
		Project Exhibition	CO Department	60

Intercollegiate Competitions

Sr. No	Type of Competition	Venue	Level	Names of Participants
1	National Level Project Competition	Lokmanya Tilak College of Engg. Navi Mumbai	Final	Ms.Pritesh Gohil, Ms.Prasad Dalal, Ms.Gaurav Khatate
2	Project Competition	Saraswati Education Society,Kharghar	Final	Mr. Mayur Choudhari, Mr. Aniket Bodhale, Mr. Bhavik Dedhia

B. Extra-Curricular Activities

Academic Year (2015-16)

Sr. No.	Name of Event	Name of Student	Prize Achievement
Cultural Events			
1	Rangoli Competition	Ms. Pramila Tiwari	Second Prize
2	Mehendi Competition	Ms. Komal Bulbule	First Prize
3	T. Shirt Painting	Ms. Shraddha Gite	Second Prize
4	Pencil Sketch Competition	Ms. Medhavi Pimpale	First Prize
5		Ms. Snehakit Parab	Third Prize
6	Antakshari Competition	Ms. Shraddha Gite and Grp	Second Prize
7	Traditional day Competition	Ms. Pooja Chaskar	Second Prize
8	Tie King Competition	Mr. Kartik Chipde	Second Prize
9	Singing Competition Solo	Mr. Kartik Chipde	First Prize
10	Singing Competition Group	Mr. Kartik Chipde and Ms. Dakshna Rathod	First Prize
11	Dance Competition Group	Ms. Shamali Thakur & Grp	Third Prize
Sports			
1	Carrom Singles	Ms. Malvika Nimbalkar	First Prize

Sr. No.	Name of Event	Name of Student	Prize Achievement
2	Carrom Singles	Ms. Anjali Gajakosh	Participation
3	Carrom Singles	Ms. Namita Jagtap	Participation
4	Carrom Singles	Ms. Gunjan Chaudhari	Participation
5	Football	TYCO (Foot Ball Team)	Participation
6	Cricket	TYCO (Cricket Team)	Participation
7	Adidas Foot ball Tournament	Mr. Nikhil Anam, Mr. Udit Pevekar, Mr. Rugved Gaje, Mr. Ketan Usapkar, Mr. Pratik Niwale, Mr. Snehankit Parab	Bronze Medal
8	Football	Mr. Nikhil Anam	Ufootball (Runnerup)
9	Football	Mr. Pratik Niwale	Ufootball (Runnerup)

Academic Year (2014-15)

Sr. No.	Name of Event	Name of Student	Prize Achievement
Cultural Events			
1	Rangoli Competition	Ms. Komal Bulbule	First Prize
2	Singing Competition	Ms. Shweta chavan	Consolation
3	Saree Queen	Ms. Shweta Chavan	Runner-Up
4	Saree Queen	Ms. Supriya Ghuhe	Winner
5	Hairstyle Competition	Ms. Priyanka Silvari	Second Prize
6	Rangoli Competition	Ms. Chaitali Brhmande	Third Prize
7	Antakshri Competition	Ms. Shruti N., Ms. Sweta C, Ms. Utkarsha, Ms. Sneha Gaikwad	Second Prize
8	Mehendi Competition	Ms. Komal Bulbule	First Prize
9	Traditional Day	Ms. Shamali thakur	First Prize
Sports			
1	Chess	Ms. Sejal Ghonate	First Prize
2	Chess	Mr. Soham Deshpande	First Prize
3	Chess	Ms. Anjali Gajakosh	Second Prize

Sr. No.	Name of Event	Name of Student	Prize Achievement
4	Carrom	Ms. Malvika Mohan Nimbalkar	First Prize
5	Table Tennis	Ms. Aditi Gangarde	First Prize
6	Carrom Doubles	Ms. Namita Jagtap, Ms shraddha gite	First Prize

Academic Year (2013-14)

Sr. No.	Name of Event	Name of Student	Prize Achievement
Cultural Events			
1	Magazine SKIT Competition	Ms. Rucha Desai, Mr. Varad pandit, Mr. Chandrakant Kshirsagar, Mr. Aniket Bodhale, Ms. Prachi Chougule, Ms. Vrushali Kedare, Ms. Sameera A. Qadari, Mr. Omkar Kakde, Mr. Pritesh R. Gohil	Participation
2	Magazine SKIT Competition	Ms. Gauri Hnade, Ms. Sneha Chindarkar, Ms. Utkarsha Borse, Ms.Pratibha Darade	Participation
3	Rangoli Competition	Ms.Neha Kedare	First Prize
4	Extempore Marathi	Mr Omkar Kakade	First Prize
5	Extempore Marathi	Mr. Nitesh Ghone	Consolation
6	Solo Singing	Mr Jayesh Parmar	Second Prize
7	Duet Singing	Mr Jayesh Parmar	First Prize
8	Nail Art	Ms. Mitalee Bhoir	Third Prize
9	Tie King	Mr Akshay Utekar	Runner Up
10	Saree Queen	Ms.Shweta Chavan	Runner Up
11	Pencil Sketch	Ms. Prachi Chougule	Second Prize
12	T Shirt Painting	Ms. Prachi Chougule	Third Prize
13	Group Discussion	Mr. Varad Pandit Mr. Abhshek Taware	First Prize
Sports			
1	Chess	Mr. Soham Deshpande	First Prize
2	Chess	Ms. Prapti Chandanshive	Second Prize
3	Carrom	Ms. Akshta Bagle	First Prize

CRITERION 3	Course Outcomes and Program Outcomes	100

3.1.   Establish the correlation between the courses and the POs & PSOs (20)

3.1.1   Course Outcomes (SAR should include course outcomes of one course from each semester of study, however prepared for all courses) (05)

Semester I - Subject & Sub Code: Basic Science -Physics(17102)

Course	Statement
C102.1	Select appropriate grammatical rules to form correct sentences
C102.2	Assess the provided text, identify new words and increase vocabulary
C102.3	Demonstrate language skills
C102.4	Comprehend and provide answers on given passages
C102.5	Deduce correct words in given situation by developing vocabulary
C102.6	Integrate all of the above in achieving in good communication

Semester II - Subject & Sub Code: Programming in C (17212)

Course	Statement
C204.1	Develop C programs with formatted input and output variables using constants and operators
C204.2	Develop C programs using decision making, branching and looping statements .
C204.3	Develop C programs using array and strings
C204.4	Demonstrate use of functions and structures
C204.5	Create pointers to write simple programs.
C204.6	Develop mini project

Semester III - Subject & Sub Code: Data Structure(17330)

Course	Statement
C302.1	Compare complexity of algorithms
C302.2	Demonstrate skills to use searching and sorting algorithms for given data
C302.3	Develop programs using concept of stack
C302.4	Develop programs using concept of queue
C302.5	Develop programs using concept of \linked List and Tree
C302.6	Develop programs using concept of Graph and Hashing functions

Semester IV - Subject & Sub Code: Computer Hardware and Maintenance (17428)

Course	Statement
C402.1	Identify the components of the motherboard, peripheral devices, interfacing ports of a PC & state know their functions and features
C402.2	Describe the various storage devices, their working, interfacing with the computer and various recording techniques.
C402.3	Describe the construction and working of various display devices like CRT, LCD monitor, Touch screen, Plasma display
C402.4	Identify the different input/ output devices, describe their construction and working principle
C402.5	Connect the power supply to the computer and check whether proper voltages are applied to various parts and peripherals of the computer and protect the system from power problems
C402.6	Use PC software and hardware diagnostic tools for troubleshooting.

Semester V - Subject & Sub Code: Computer Security(17514)

Course	Statement
C503.1	Identify need of computer security, threats, and attacks to identify them.
C503.2	Recall identification, authentication and use biometrics, password management to get operational security.
C503.3	Recall various cryptogaphic techniques and use them to obtain encrypted text.
C503.4	Recall the techniques used in intrusion detection.
C503.5	Recall and use cyber laws and IT acts, network authentication protocols.
C503.6	Recall and use application and web security.

Semester VI - Subject & Sub Code: Advanced Java Programming (17625)

Course	Statement
C603.1	Design & develop Graphical user interface (GUI) programs using AWT and swing component and using different layout managers Statement
C603.2	Write event driven programs using the delegation event model & using adapter classes
C603.3	Write program to demonstrate connectivity through software SOCKETS, TCP, ISP, URL using java.net package

C603.4	Create database driven business applications using the java.Sql package
C603.5	Write web based applications using servlets, JSP, Java Beans, cookies and session tracking.
C603.6	Implement these concepts in programming as well as in project.

3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per Semester from Ist to VIth semester) (5)

Semester I - Subject Name and Code: Basic Science Physics (17102)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C102.1	3	3	3	3	2	2	2	3	2	3
C102.2	3	3	3	3	2	1	3	2	2	3
C102.3	3	3	3	3	2	2	2	2	2	2
C102.4	3	2	3	3	2	2	3	2	2	2
C102.5	3	3	3	3	2	2	2	2	2	2
C102.6	3	3	3	3	2	2	3	2	1	1
C102 TOTAL	18	17	18	18	12	11	15	13	11	13
Correlation Level	3	3	3	3	2	2	3	2	2	2

Semester II - Subject Name and Code: Programming in 'C' (17212)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C204.1	1	2	3	3	1	3	2	2	2	3
C204.2	1	2	3	3	1	3	2	2	2	3
C204.3	1	2	3	3	1	3	2	2	2	3
C204.4	1	2	3	3	1	3	2	2	2	3
C204.5	1	2	3	3	1	3	2	2	2	3
C204.6	1	2	3	3	3	3	2	2	2	3
C204 TOTAL	6	12	18	18	8	18	12	12	12	18
Correlation Level	1	2	3	3	2	3	2	2	2	3

Semester III - Subject Name and Code: Data Structure (17330)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C302.1	1	3	2	2	1	1	3	2	1	3
C302.2	1	3	2	2	1	2	3	2	2	3
C302.3	1	3	2	2	1	2	3	3	2	3
C302.4	1	3	3	3	1	2	3	3	2	3
C302.5	1	3	3	3	1	2	3	3	2	3
C302.6	1	3	3	3	1	2	3	3	2	3
C302 TOTAL	6	18	15	15	6	11	18	16	11	18
Correlation Level	**1**	**3**	**3**	**3**	**1**	**2**	**3**	**3**	**2**	**3**

Semester IV- Subject Name and Code: Computer Hardware and Maintenance (17428)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C402.1	1	3	3	3	1	2	3	2	1	2
C402.2	1	3	2	3	1	2	3	2	2	3
C402.3	1	3	2	2	1	2	3	2	2	3
C402.4	1	3	2	2	2	2	3	3	2	3
C402.5	1	3	2	2	2	2	3	2	2	2
C402.6	1	3	2	2	3	2	3	2	2	2
C402 TOTAL	6	18	13	14	10	12	18	13	11	15
Correlation Level	1	3	3	3	2	2	3	3	2	3

Semester V - Subject Name and Code: Computer Security (17514)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C503.1	1	3	2	3	3	2	3	2	2	3
C503.2	1	3	2	3	3	2	3	2	2	3
C503.3	1	3	2	3	3	2	3	2	2	3
C503.4	1	3	2	3	3	2	3	2	2	3
C503.5	1	3	2	3	3	2	3	2	2	3
C503.6	1	2	2	3	3	2	3	2	2	3
C503 TOTAL	6	17	12	18	18	12	18	12	12	18
Correlation Level	1	3	2	3	3	2	3	2	2	3

Semester VI - Subject Name and Code: Advanced Java Programming (17625)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
C603.1	1	3	3	3	2	3	2	1	3	3
C603.2	1	3	3	3	2	2	2	2	3	3
C603.3	1	3	3	3	2	2	2	1	3	3
C603.4	1	3	3	3	2	3	2	1	3	3
C603.5	1	3	3	3	2	2	2	1	3	3
C603.6	1	3	3	3	3	2	2	1	3	3
C603 TOTAL	6	18	18	18	13	14	12	7	18	18
Correlation Level	1	3	3	3	3	3	2	2	3	3

CO-PSO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per Semester from Ist to VIth semester)

Semester I - Subject Name and Code: Basic Science Physics (17102)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C102.1	-	1	1	-
C102.2	-	1	1	-
C102.3	-	1	1	-
C102.4	-	1	1	-
C102.5	-	1	1	-
C102.6	-	1	1	-
C102 TOTAL	0	6	6	0
Correlation Level	**0**	**1**	**1**	**0**

Semester II - Subject Name and Code: Programming in 'C' (17212)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C204.1	3	3	3	3
C204.2	3	3	3	3
C204.3	3	3	3	3
C204.4	3	3	3	3
C204.5	3	3	3	3
C204.6	3	3	3	3
C204 TOTAL	18	18	18	18
Correlation Level	**3**	**3**	**3**	**3**

Semester III - Subject Name and Code: Data Structure (17330)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C302.1	3	3	3	3
C302.2	3	3	3	3
C302.3	3	3	3	3
C302.4	3	3	3	3
C302.5	3	3	3	3
C302.6	3	3	3	3
C302 Total	18	18	18	18
Correlation Level	3	3	3	3

Semester IV - Subject Name and Code: Computer Hardware and Maintenance (17428)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C402.1	3	3	3	3
C402.2	3	2	3	3
C402.3	3	2	3	3
C402.4	3	2	3	3
C402.5	3	2	3	3
C402.6	3	2	3	2
C402 TOTAL	18	13	18	17
Correlation Level	3	3	3	3

Semester V - Subject Name and Code: Computer Security (17514)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C503.1	2	1	1	1
C503.2	1	2	1	2
C503.3	1	2	1	2
C503.4	1	2	1	1
C503.5	1	2	1	1
C503.6	1	2	1	1
C503 TOTAL	7	11	6	8
Correlation Level	**2**	**2**	**1**	**2**

Semester VI - Subject Name and Code: Advanced Java Programming (17625)

Course Outcome	PSO1	PSO2	PSO3	PSO4
C603.1	3	3	3	3
C603.2	3	3	3	3
C603.3	3	3	3	3
C603.4	3	3	3	3
C603.5	3	3	3	3
C603.6	3	3	3	3
C603 Total	18	18	18	18
Correlation Level	**3**	**3**	**3**	**3**

3.1.3. Program level Course-PO matrix of all courses including first year courses (10)

COURSE	Course-Code	PO1.	PO2	PO3.	PO4.	PO5.	PO6.	PO7.	PO8.	PO9.	PO 10.
C101	ENG			2	2	3	3	3	1	3	3
C102	EPH	3	3	3	3	2	2	3	2	2	2
C103	ECH	3	2	3	2	3	3	2	2	2	3
C104	BMS	3	2	2	1	2	2	2	2	1	2
C105	EGG	2			2	1	2	2	1	2	1
C106	CMF	2	2	2	2	2	2	3	2	1	2
C107	WPI	1	2	2	2	1	2	2	2	2	2
C201	CMS						1	2	2	3	1
C202	APH	3	2	2	1	1	1	2		1	1
C203	ACH	3	2	2	2	2	3	1		1	1
C204	PIC	1	2	3	3	2	3	2	2	2	3
C205	BEL	1	2	2	2	1	2	2	2	1	2
C206	EMS	3				1	1	2			
C207	DLS	1	1	1	1	2	2	2	2	2	1
C208	WPD	1	2	2	2	1	1	3	3	1	2
C301	AMS	3	1			1	1	2	1	1	1
C302	DSU	1	3	3	3	1	2	3	3	2	3
C303	ETE	2	2	2	2	1	2	2	1	2	3
C304	RDM	1	2	2	2	2	2	1	2	2	2
C305	DTE	1	2	2	2	2	2	2	2	1	1
C306	GUI		2	2	2	1	1	2	2	2	2
C307	PP		2	1	1	1	2	2	3	1	2
C401	EST	2	2	2	2	2	3	2	2	2	3
C402	CHM	1	3	3	3	2	2	3	3	2	3
C403	CNE	1	2	2	2	2	2	2	2	2	3
C404	MAP	1	1	2	2	1	1	2	2	3	3
C405	OOP	1	2	2	3	2	2	3	1	2	3
C406	CGR	2	3	3	2	2	2	2	2	2	3
C407	PPT		2	1	2	2	3	2	1	3	1
C501	OSY	1	2	3	2	3	3	3	3	3	3
C502	SEN	1	3	2	2	3	2	2	2	2	3
C503	CSE	1	3	2	3	3	2	3	2	2	3
C504	JPR	1	3	3	3	3	2	1	2	3	3
C505	PWV	1	3	3	3	3	2	1	2	2	2
C506	BSC	1	3	3	2	3	3	1	3	3	3
C507	NMA	1	3	3	3	3	2	2	2	2	3
C508	PPT	1	3	3	2	2	3	3	2	3	3
C601	MAN	1	1	2	2	3	3	2	2	2	3
C602	STE	1	3	3	3	3	3	2	2	2	3
C603	AJP	1	3	3	3	3	3	2	2	3	3
C604	AMI	1	2	2	2	2	3	2	2	2	3
C605	LPR	2	2	2	2	3	2	2	1	2	3
C606	IPR	3	3	3	3	3	3	3	2	3	3
C607	EDE	1	1	3	3	3	3	3	3	3	3

Program level Course PSO matrix of all courses INCLUDING first year courses

COURSE	Course-Code	PSO1	PSO2	PSO3	PSO4
C101	ENG				2
C102	EPH		1	1	
C103	ECH		1	1	
C104	BMS				
C105	EGG		1	1	
C106	CMF	1	2	2	2
C107	WPI	1	2	2	2
C201	CMS				1
C202	APH		1	1	
C203	ACH		1	1	1
C204	PIC	3	3	3	3
C205	BEL		2	1	2
C206	EMS				
C207	DLS				1
C208	WPD	3	3	3	3
C301	AMS				
C302	DSU	3	3	3	3
C303	ETE	1	3	2	2
C304	RDM	3	3	3	3
C305	DTE		2	3	2
C306	GUI	3	3	3	3
C307	PP				1
C401	EST				2
C402	CHM	3	3	3	3
C403	CNE	3	3	3	3
C404	MAP		1	1	
C405	OOP	3	3	2	3
C406	CGR	3	3	2	3
C407	PPT	1	1	1	2
C501	OSY	3	2	1	1
C502	SEN	1			1
C503	CSE	2	2	1	2
C504	JPR	3	3	3	3
C505	PWV	3	3	3	3
C506	BSC				1
C507	NMA	3	3	3	3
C508	PPT				1
C601	MAN			3	
C602	STE	2	3	3	3
C603	AJP	3	3	3	3
C604	AMI	2	2	2	
C605	LPR	3	2	3	2
C606	IPR	3	3	3	2
C607	EDE	3	3	3	3

3.2. Attainment of Course Outcomes (40)

3.2.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Following processes have been undertaken to find the attainment of course outcomes. For direct attainment the progressive test result, MSBTE result is taken into consideration.

Progressive Tests

- Two progressive tests are conducted in each semester – one in the mid-semester and the other at the end of semester.

- MSBTE provides Teacher's guide for all subjects. It includes lecture wise topics to be covered and the portion to be completed before each progressive test. Teacher's guide is strictly followed.

- Teacher's guide also includes sample question papers as guide lines for setting question paper for progressive tests.

- Course outcome of the subject are taken into consideration while setting up the question paper.

- After paper assessment the attainment of course outcome is found by determining the number of students having met the set standard in the said subject.

- Based on the above calculation the attainment level is found.

MSBTE Exam

- MSBTE provides teaching scheme for every semester, which includes the components viz., Theory Exam, Practical/Oral exam and term work along with the maximum marks allotted for each component.

- The marks of the applicable components are added and attainment of course outcome is found by determining the number of students who have met the set standard in the said subject.

The direct attainment is calculated by taking into consideration the 20% of allotment level for class test and 80% of allotment for MSBTE exam.
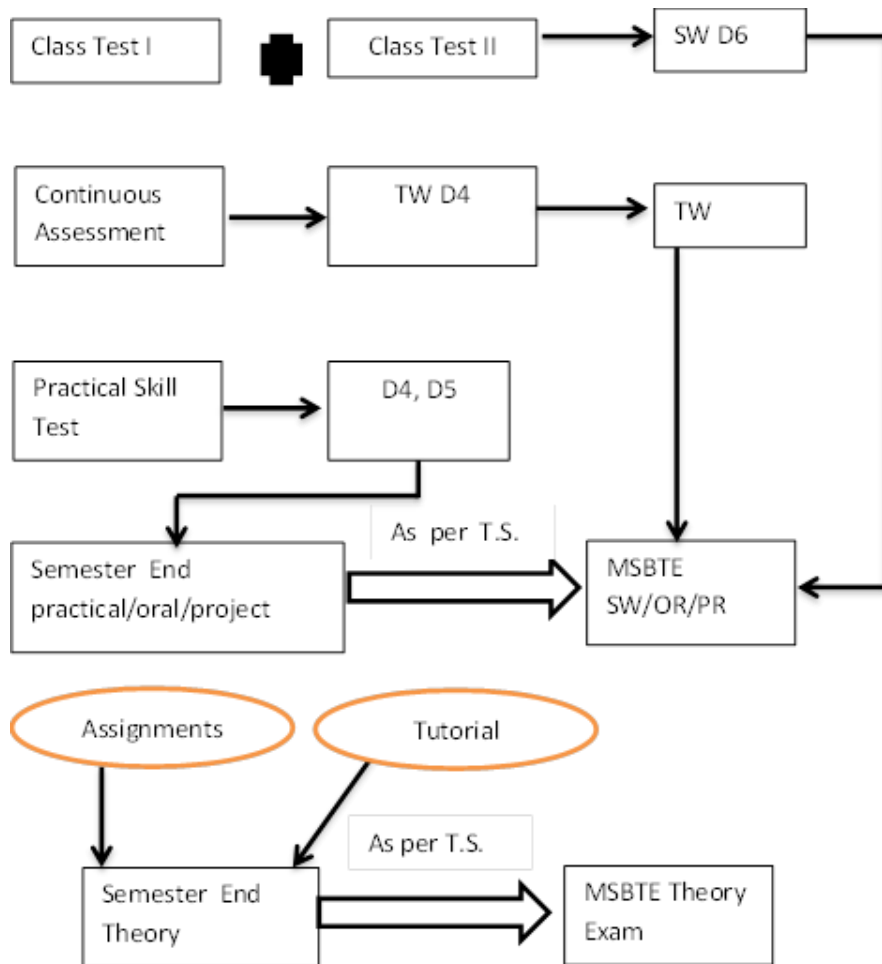
3.2.2. Record the attainment of Course Outcomes of all courses with respect to set attainment levels (30)

Average marks selected by the Program = 40% of total mark to assess a course.

Justification: Program has set course outcome attainment level for all courses. To measure course outcome attained through board examination target level is stated as percentage of students getting more than the level selected by program. Program has continued to consider common average mark for academic years 2013-2014 and 2014-2015.

 For the following table calculation of attainment level for three years has been done. It was observed that with the set standard of 40% the achieved level was higher than the target level.

Hence for the year 2015-16 the set standard was raised to 50%. With this standard, the target and achieved levels match.

Program defined attainment levels vs. target for Internal and Board Exams are,

Attainment Level	Target Level
Attainment Level 1	up to 50% students scoring more than average percentage marks
Attainment Level 2	51% to 60% students scoring more than average percentage marks
Attainment Level 3	61% to 70% students scoring more than average percentage marks
Attainment Level 4	71% 80% students scoring more than average percentage marks
Attainment Level 5	above 80% students scoring more than average percentage marks

Measuring Course Outcomes attained through board examinations

Measuring CO attainment through Internal Assessments:

Course	Course Code	2015-16	2014-15	2013-14
C101	ENG	4.8	4.8	4.8
C102	EPH	3.8	4.6	4.8
C103	ECH	4.2	5	5
C104	BMS	4.8	4.6	5
C105	EGG	5	5	4
C106	CMF	5	5	4
C107	WPI	5	5	4
C201	CMS	4.8	5	5
C202	APH	5	3.8	4.8
C203	ACH	4.8	4	4.4
C204	PIC	4.2	4.6	4.4
C205	BEL	1.6	3.8	3
C206	EMS	3.2	3.8	3
C207	DLS	5	5	4
C208	WPD	5	5	4
C301	AMS	1.4	4.2	2.8
C302	DSU	4.8	4.8	4.8
C303	ETE	2.4	4	4.8
C304	RDM	3	4.8	4.8
C305	DTE	2.2	4.6	4.4
C306	GUI	4	5	4
C307	PP	4	5	4
C401	EST	4	5	5
C402	CHM	3	4.8	4.8
C403	CNE	4.2	5	4.8
C404	MAP	3	4.8	4.8
C405	OOP	4	5	4.8
C406	CGR	5	5	4
C407	PPT	5	5	4
C501	OSY/OPS	5	5	4.6
C502	SEN/SWE	5	5	5
C503	CSE/CSR	5	5	5
C504	JPR	5	5	4.6
C505	PWV	5	5	-
C506	BSC/AMC	5	5	5
C507	NMA	5	5	4
C508	PPT/PPR	5	5	4
C601	MAN	4.2	5	5
C602	STE	5	5	5
C603	AJP	5	5	5
C604	AMI	5	5	4.6
C605	LPR	5	5	5
C606	IPR	5	5	5
C607	EDE/EDS	5	5	5

Internal Exam		Academic Year 2015-16		Academic Year 2014-15		Academic Year 2013-14	
Course	Course Code	Percentage Of Students above Set standard	Attainment Level	Percentage Of Students above Set standard	Attainment Level	Percentage Of Students above Set standard	Attainment Level
		Semister I No of Students-=61		Semister I No of Students=61		Semister I No of Students=62	
C101	ENG	63.93	3	75.41	4	133.33	4
C102	EPH	55.74	2	62.30	3	150.00	4
C103	ECH	77.05	4	83.61	5	125.00	5
C104	BMS	70.49	4	65.57	3	75.00	5
C105	EGG						
C106	CMF			No Theory Exam			
C107	WPI						
		SEMISTER-II NO OF STUDENTS=61		SEMISTER-II NO OF STUDENTS=61		SEMISTER-II NO OF STUDENTS=62	
C201	CMS	59.02	2	90.16	5	250.00	5
C202	APH	78.69	4	60.66	3	75.00	4
C203	ACH	70.49	4	75.41	4	100.00	2
C204	PIC	78.69	4	62.30	3	75.00	2
C205	BEL	75.41	4	62.30	3	75.00	3
C206	EMS	68.85	3	67.21	3	100.00	3
C207	DLS			No Theory Exam			
C208	WPD						
		SEMISTER-III=83 NO OF STUDENTS		SEMISTER-III NO OF STUDENTS=72		SEMISTER-III NO OF STUDENTS=69	
C301	AMS	57.83	2	86.11	5	56.52	2
C302	DSU	67.47	3	79.17	4	72.46	4
C303	ETE	65.06	3	77.78	4	78.46	4
C304	RDM	60.24	3	73.61	4	71.01	4
C305	DTE	53.01	2	68.06	3	59.42	2
C306	GUI			No Theory Exam			
C307	PPO						
		SEMISTER-IV NO OF STUDENTS=83		SEMISTER-IV NO OF STUDENTS=72		SEMISTER-IV NO OF STUDENTS=68	
C401	EST	56.627	2	100.00	5	86.76	5
C402	CHM	56.627	2	76.39	4	76.47	4
C403	CNE	81.928	5	90.28	5	77.94	4
C404	MAP	56.627	2	70.83	4	70.59	4
C405	OOP	72.289	4	84.72	5	70.59	4
C406	CGR			No Theory Exam			
C407	PPT						
		SEMISTER-V NO OF STUDENTS=77		SEMISTER-V NO OF STUDENTS=61		SEMISTER-V NO OF STUDENTS=79	
C501	OSY/OPS	81.82	5	64.56	3	64.56	3
C502	SEN/SWE	68.83	3	64.56	3	81.01	5
C503	CSE/CSR	88.31	5	64.56	3	91.14	5
C504	JPR	70.13	4	64.56	3	60.76	3
C505	PWV/AMP					94.94	5
C506	BSC			No Theory Exam			
C507	NMA					No Theory Exam	
C508	PPT/PPR						
		SEMISTER-VI NO OF STUDENTS=77		SEMISTER-VI NO OF STUDENTS=61		SEMISTER-VI NO OF STUDENTS=79	
C601	MAN	85.71	5	93.67	5	93.67	5
C602	STE/STG	94.81	5	93.67	5	97.47	5
C603	AJP	80.52	5	93.67	5	69.62	3
C604	AMI/EDS	87.01	5	93.67	5	89.87	5
C605	LPR/PPS						
C606	IPR			No Theory Exam			
C607	EDE/EDP						

MSBTE Board Examinations

Board Exam		Academic year 2015-16		Academic year 2014-15		Academic year 2013-14	
Course	Course code	Percentage of students above set standard	Attainment level	Percentage of students above set standard	Attainment level	Percentage of students above set standard	Attainment level
		Semester I No.of students=61		Semester I No.of students=61		Semester I No.of students=62	
C101	ENG	96.72	5	100.00	5	96.77	5
C102	EPH	75.41	4	93.44	5	95.16	5
C103	ECH	75.41	4	93.44	5	95.16	5
C104	BMS	91.80	5	80.33	5	85.48	5
C105	EGG	100.00	5	100.00	5	100.00	5
C106	CMF	100.00	5	100.00	5	100.00	5
C107	WPI	100.00	5	100.00	5	100.00	5
		Semester II No.of students =59		Semester II No.of students=61		Semester II No.of students=61	
C201	CMS	91.53	5	100.00	5	98.36	5
C202	APH	86.44	5	77.05	4	95.08	5
C203	ACH	86.44	5	77.05	4	95.08	5
C204	PIC	76.27	4	86.89	5	80.33	5
C205	BEL	47.46	1	77.05	4	60.66	3
C206	EMS	52.54	3	77.05	4	67.21	3
C207	DLS	98.31	5	98.36	5	100.00	5
C208	WPD	89.83	5	98.36	5	100.00	5
		Semester III No.of students=83		Semester III No.of students=72		Semester III No.of students=69	
C301	AMS	43.37	1	76.39	4	65.22	3
C302	DSU	83.13	5	98.61	5	95.65	5
C303	ETE	55.42	2	77.78	4	91.30	5
C304	RDM	69.88	3	93.06	5	95.65	5
C305	DTE	51.81	2	87.50	5	95.65	5
C306	GUI	73.49	4	100.00	5	100.00	5
C307	PPO	96.39	5	100.00	5	100.00	5
		Semester IV No.of students=83		Semester IV No.of students=72		Semester IV No.of students=68	
C401	EST	78.31	4	97.22	5	98.53	5
C402	CHM	68.67	3	100.00	5	95.59	5
C403	CNE	78.31	4	97.22	5	95.59	5
C404	MAP	67.47	3	80.56	5	91.18	5
C405	OOP	74.70	4	98.61	5	88.24	5
C406	CGR	66.27	3	100.00	5	100.00	5
C407	PPT	85.54	5	100.00	5	100.00	5
		Semester V No.of students=77		Semester V No.of students=61		Semester V No.of students=76	
C501	OSY/OPS	96.10	5	100.00	5	92.41	5
C502	SEN/SWE	83.12	5	100.00	5	86.08	5
C503	CSE/CSR	94.81	5	100.00	5	93.67	5
C504	JPR	94.81	5	100.00	5	96.20	5
C505	PWV/AMP	100.00	5	100.00	5	94.94	5
C506	BSC	100.00	5	100.00	5	No corresponding subject in E scheme	
C507	NMA	100.00	5	100.00	5	100.00	5
C508	PPT/PPR	100.00	5	100.00	5	100.00	5
		Semester VI No.of students=77		Semester VI No.of students=61		Semester VI No.of students=76	
C601	MAN	70.13	4	100.00	5	97.47	5
C602	STE/STG	98.70	5	100.00	5	94.94	5
C603	AJP	98.70	5	100.00	5	98.73	5
C604	AMI/EDP	88.31	5	98.36	5	100.00	5
C605	LPR/PPS	100.00	5	100.00	5	100.00	5
C606	IPR	100.00	5	100.00	5	100.00	5
C607	EDE/EDS	100.00	5	100.00	5	92.41	5

3.3. Attainment of Program Outcomes & Program Specific Outcomes (40)

3.3.1. Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1 (10)

Assessment Tools
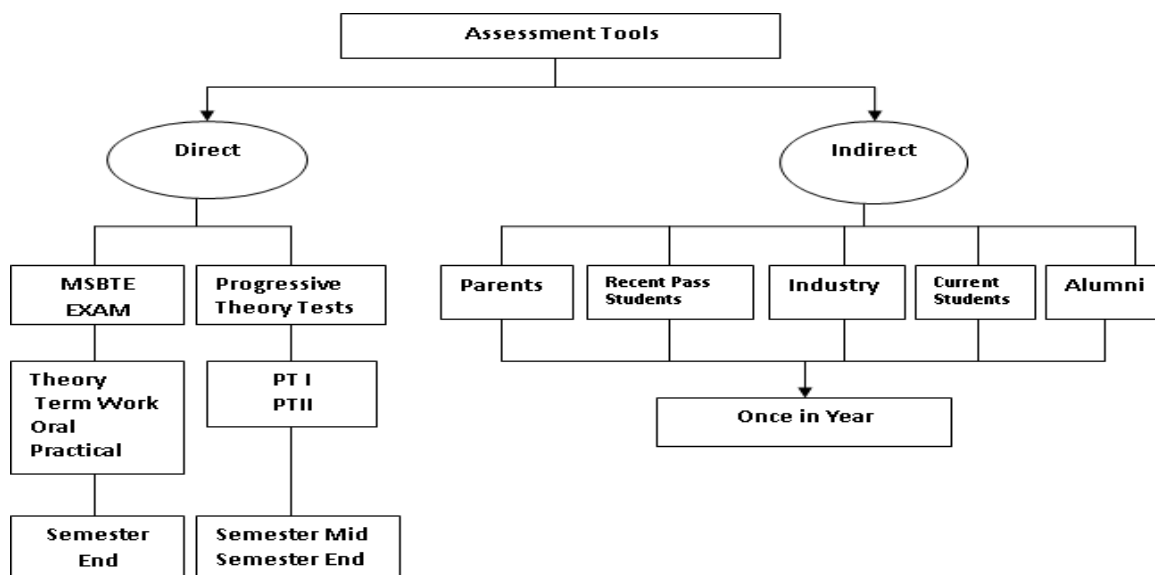
- The input to polytechnic education system is the students having 10+ qualifications.

- The MSBTE curriculum is revised every five years and is prepared taking the industry needs into consideration.

- An Industry survey is conducted on state level and feedback received is taken into consideration along with suggestions received from subject experts.

- Subject experts from various institutes are invited to prepare the content detailing of Theory and Laboratory work.

- Bloom's Revised Taxonomy is used while implementing the curriculum.

- MSBTE provides training to the faculty across the state of Maharashtra.

- The subject teacher identifies 5-6 course outcomes as given in Table 3.1.1 in the SAR.

- Course Outcomes are then mapped with the Program Outcomes & Program Specific Outcomes.Correlation levels are entered and the overall Course Outcome is calculated.

- All the Outcomes of various Courses are mapped with the POs and PSOs & correlation levels are entered in CO-PO/ CO-PSO Matrix.

- The Course Outcomes are measured for Progressive tests as well as MSBTE Board Examinations by setting standards and calculating the number of students scoring above the set standard. The Progressive tests and MSBTE Exam give Direct Attainment Level.

- 80% of the Direct Attainment levels are calculated.

- For Indirect Attainment, the average scores of the feedback taken from various stakeholders is taken.

- 20% of the score is considered for calculation of Attainment Levels.

- The Direct & Indirect attainment levels of POs& PSOs are added and Attainment Levels are calculated.

Course Delivery Method	PO1.	PO2	PO3.	PO4.	PO5.	PO6.	PO7.	PO8.	PO9.	PO 10	PSO1.	PSO2.	PSO3.	PSO4.
Class Room Lecture	√			√	√	√	√	√		√	√	√	√	
Labrotary Sessions	√	√		√	√	√		√	√	√	√	√	√	√
Assignments	√			√	√	√				√	√		√	
Projects	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Seminars					√	√				√				
Visits	√			√	√	√				√		√		
Notes/ E learning Materials				√						√		√	√	
PR/OR	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Attainment Process
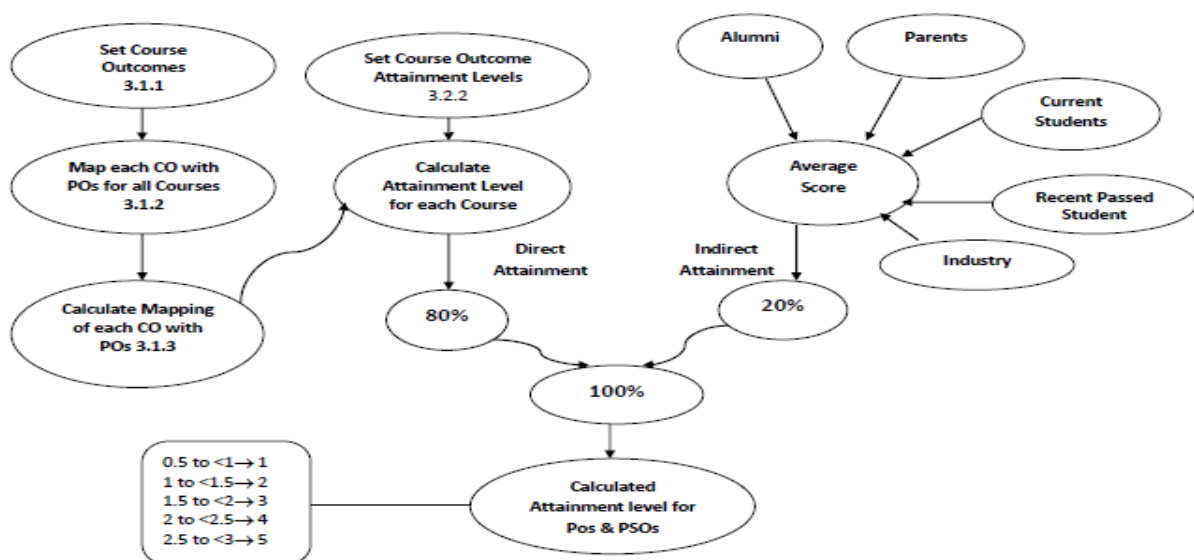
3.3.2. Provide results of evaluation of each PO & PSO (30)

Academic Year (2015-16)

COURSE	Course-Code	CO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PSO1	PSO2	PSO3	PSO4
C101	ENG	4.8			1.92	1.92	2.88	2.88	2.88	0.96	2.88	2.88				1.92
C102	EPH	3.8	2.28	2.28	2.28	2.28	1.52	1.52	2.28	1.52	1.52	1.52		0.76	0.76	
C103	ECH	4.2	2.88	1.68	2.52	1.68	2.52	2.52	1.68	1.68	1.68	2.52		0.84	0.84	
C104	BMS	4.8	2.88	1.92	1.92	0.96	1.92	1.92	1.92	1.92	0.96	1.92		0	0	
C105	EGG	5	2			2	1	2	2	1	2	1		1	1	
C106	CMF	5	2	2	2	2	2	2	3	2	1	2	1	2	2	2
C107	WPI	5	0.96	2	2	2	1	2	2	2	2	2	1	2	2	2
C201	CMS	4.8						0.96	1.92	1.92	2.88	0.96				0.96
C202	APH	5	0.48	2	2	1	1	1	2		1	1		1	1	0
C203	ACH	0.8	0.48	0.32	0.32	0.32	0.32	0.48	0.16		0.16	0.16		0.16	0.16	0.16
C204	PIC	4.2	0.32	1.68	2.52	2.52	1.68	2.52	1.68	1.68	1.68	2.52	2.52	2.52	2.52	2.52
C205	BEL	1.6	0.32	0.64	0.64	0.64	0.32	0.64	0.64	0.64	0.32	0.64		0.64	0.32	0.64
C206	EMS	3.2	3				0.64	0.64	1.28							
C207	DLS	5	1	1	1	1	2	2	2	2	2	1				1
C208	WPD	5	0.28	2	2	2	1	1	3	3	1	2	3	3	3	3
C301	AMS	1.4	0.84	0.28			0.28	0.28	0.56	0.28	0.28	0.28				
C302	DSU	4.8	0.48	2.88	2.88	2.88	0.96	1.92	2.88	2.88	1.92	2.88	2.88	2.88	2.88	2.88
C303	ETE	2.4	0.96	0.96	0.96	0.96	0.48	0.96	0.96	0.48	0.96	1.44	0.48	1.44	0.96	0.96
C304	RDM	3	0.44	1.2	1.2	1.2	1.2	1.2	0.6	1.2	1.2	1.2	1.8	1.8	1.8	1.8
C305	DTE	2.2	0.44	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.44	0.44	0	0.88	1.32	0.88
C306	GUI	4		1.6	1.6	1.6	0.8	0.8	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4
C307	PP	4		1.6	0.8	0.8	0.8	1.6	1.6	2.4	0.8	1.6				0.8
C401	EST	4	1.2	1.6	1.6	1.6	1.6	2.4	1.6	1.6	1.6	2.4				1.6
C402	CHM	3	0.6	1.8	1.8	1.8	1.2	1.2	1.8	1.8	1.2	1.8	1.8	1.8	1.8	1.8
C403	CNE	4.2	0.6	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	2.52	2.52	2.52	2.52	2.52
C404	MAP	3	0.6	0.6	1.2	1.2	0.6	0.6	1.2	1.2	1.8	1.8	0	0.6	0.6	0
C405	OOP	4	1	1.6	1.6	2.4	1.6	1.6	2.4	0.8	1.6	2.4	2.4	2.4	1.6	2.4
C406	CGR	5	2	3	3	2	2	2	2	2	2	3	3	3	2	3
C407	PPT	5		2	1	2	2	3	2	1	3	1	1	1	1	2
C501	OSY	5	1	2	3	2	3	3	3	3	3	3	3	2	1	1
C502	SEN	5	1	3	2	2	3	2	2	2	2	3	1			1
C503	CSE	5	1	3	2	3	3	2	3	2	2	3	2	2	1	2
C504	JPR	5	1	3	3	3	3	2	1	2	3	3	3	3	3	3
C505	PWV	5	1	3	3	3	3	2	1	2	2	2	3	3	3	3
C506	BSC	5	1	3	3	2	3	3	1	3	3	3				1
C507	NMA	5	1	3	3	3	3	2	2	2	2	3	3	3	3	3
C508	PPT	5	0.84	3	3	2	2	3	3	2	3	3				1
C601	MAN	4.2	0.84	0.84	1.68	1.68	2.52	2.52	1.68	1.68	1.68	2.52			2.52	
C602	STE	5	1	3	3	3	3	3	2	2	2	3	2	3	3	3
C603	AJP	5	1	3	3	3	3	3	2	2	3	3	3	3	3	3
C604	AMI	5	1	2	2	2	2	3	2	2	2	3	2	2	2	
C605	LPR	5	2	2	2	2	3	2	2	1	2	3	3	2	3	2
C606	IPR	5	3	3	3	3	3	3	3	2	3	3	3	3	3	2
C607	EDE	5	1	1	3	3	3	3	3	3	3	3	3	3	3	3
Count		44	39	40	40	41	43	44	44	41	43	43	27	33	34	36
Direct Attainment			1.2	1.9	2.0	1.9	1.8	1.9	1.9	1.8	1.8	2.1	2.1	1.9	1.9	1.8
80% Direct attainment			0.9	1.5	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.7	1.7	1.5	1.5	1.4
Indirect Attainment			3	3	3	3	3	3	3	3	3	3	3	3	3	3
20% of Indirect			0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
100% attainment			1.5	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.3	2.3	2.1	2.1	2.0
Attainment Level			3	4	4	4	3	4	3	3	3	4	4	4	4	4

Academic Year (2014-15)

COURSE	Course-Code	CO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PSO1	PSO2	PSO3	PSO4
C101	ENG	4.8			1.92	1.92	2.88	2.88	2.88	0.96	2.88	2.88				1.92
C102	EPH	4.6	3	3	3	3	2	2	3	2	2	2		1	1	
C103	ECH	5	3	2	3	2	3	3	2	2	2	3		1	1	
C104	BMS	4.6	2.76	1.84	1.84	0.92	1.84	1.84	1.84	1.84	0.92	1.84				
C105	EGG	5	2			2	1	2	2	1	2	1		1	1	
C106	CMF	5	2	2	2	2	2	2	3	2	1	2	1	2	2	2
C107	WPI	5	1	2	2	2	1	2	2	2	2	2	1	2	2	2
C201	CMS	5						0.76	1.52	1.52	2.28	0.76				0.76
C202	APH	3.8	2.28	1.52	1.52	0.76	0.76	0.76	1.52		0.76	0.76		0.76	0.76	
C203	ACH	4	2.4	1.6	1.6	1.6	1.6	2.4	0.8		0.8	0.8		0.8	0.8	0.8
C204	PIC	4.6	0.76	1.52	2.28	2.28	1.52	2.28	1.52	1.52	1.52	2.28	2.28	2.28	2.28	2.28
C205	BEL	3.8	0.76	1.52	1.52	1.52	0.76	1.52	1.52	1.52	0.76	1.52	0	1.52	0.76	1.52
C206	EMS	3.8	2.28				0.76	0.76	1.52							
C207	DLS	5	1	1	1	1	2	2	2	2	2	1				1
C208	WPD	5	1	2	2	2	1	1	3	3	1	2	3	3	3	3
C301	AMS	4.2	2.52	0.84			0.84	0.84	1.68	0.84	0.84	0.84				
C302	DSU	4.8	0.8	2.4	2.4	2.4	0.8	1.6	2.4	2.4	1.6	2.4	2.4	2.4	2.4	2.4
C303	ETE	4	1.6	1.6	1.6	1.6	0.8	1.6	1.6	0.8	1.6	2.4	0.8	2.4	1.6	1.6
C304	RDM	4.8	0.96	1.92	1.92	1.92	1.92	1.92	0.96	1.92	1.92	1.92	2.88	2.88	2.88	2.88
C305	DTE	4.6	1	2	2	2	2	2	2	2	1	1		2	3	2
C306	GUI	5		2	2	2	1	1	2	2	2	2	3	3	3	3
C307	PP	5		2	1	1	1	2	2	3	1	2				1
C401	EST	5	1.92	1.92	1.92	1.92	1.92	2.88	1.92	1.92	1.92	2.88				1.92
C402	CHM	4.8	0.96	2.88	2.88	2.88	1.92	1.92	2.88	2.88	1.92	2.88	2.88	2.88	2.88	2.88
C403	CNE	5	1	2	2	2	2	2	2	2	2	3	3	3	3	3
C404	MAP	4.8	1	1	2	2	1	1	2	2	3	3		1	1	
C405	OOP	5	1	2	2	3	2	2	3	1	2	3	3	3	2	3
C406	CGR	5	2	3	3	2	2	2	2	2	2	3	3	3	2	3
C407	PPT	5		2	1	2	2	3	2	1	3	1	1	1	1	2
C501	OSY	5	1	2	3	2	3	3	3	3	3	3	3	2	1	1
C502	SEN	5	1	3	2	2	3	2	2	2	2	3	1			1
C503	CSE	5	1	3	2	3	3	2	3	2	2	3	2	2	1	2
C504	JPR	5	1	3	3	3	3	2	1	2	3	3	3	3	3	3
C505	PWV	5	1	3	3	3	3	2	1	2	2	2	3	3	3	3
C506	BSC	5	1	3	3	2	3	3	1	3	3	3				1
C507	NMA	5	1	3	3	3	3	2	2	2	2	3	3	3	3	3
C508	PPT	5	1	3	3	2	2	3	3	2	3	3				1
C601	MAN	5	1	1	2	2	3	3	2	2	2	3				3
C602	STE	5	1	3	3	3	3	3	2	2	2	3	2	3	3	3
C603	AJP	5	1	3	3	3	3	3	2	2	3	3	3	3	3	3
C604	AMI	5	1	2	2	2	2	3	2	2	2	3	2	2	2	
C605	LPR	5	2	2	2	2	3	2	2	1	2	3	3	2	3	2
C606	IPR	5	3	3	3	3	3	3	3	2	3	3	3	3	3	2
C607	EDE	5	1	1	3	3	3	3	3	3	3	3	3	3	3	3
Direct Attainment			1.46	2.14	2.24	2.14	2.01	2.09	2.06	1.93	1.97	2.31	2.32	2.22	2.13	2.12
80% Direct attainment			1.17	1.71	1.79	1.71	1.61	1.67	1.65	1.54	1.58	1.84	1.85	1.77	1.71	1.69
Indirect Attainment			3	3	3	3	3	3	3	3	3	3	3	3	3	3
20% of Indirect			0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
100% attainment			1.77	2.31	2.39	2.31	2.21	2.27	2.25	2.14	2.18	2.44	2.45	2.37	2.31	2.29
Attainment Level			3	4	4	4	4	4	3	4	4	4	4	4	4	4

Academic Year (2013-14)

COURSE	Course-Code	CO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PSO1	PSO2	PSO3	PSO4
C101	ENG	4.8			1.92	1.92	2.88	2.88			0.96	2.88				1.92
C102	EPH	4.8	2.88	2.88	1.92	0.96	1.92	1.92	0.96	1.92	1.92	1.92		0.96	0.96	
C103	ECH	5	3	3	3	2	3	3	2	2	2	3		1	1	
C104	BMS	5	3	2	2	1	2	2		2	1	2				
C105	EGG	4	1.6				0.8	1.6			0.8	0.8		0.8	0.8	
C106	CMF	4	1.6	1.6	1.6	1.6	1.6	1.6	0.8		0.8	1.6	0.8	1.6	1.6	1.6
C107	WPI	4	0.8	0.8	1.6	1.6	0.8	1.6		1.6	1.6	1.6	0.8	1.6	1.6	1.6
C201	CMS	5						3			3					1
C202	APH	4.8	2.88	1.92			0.96	0.96	0.96			0.96		0.96	0.96	
C203	ACH	4.4	2.64	1.76			1.76	2.64	0.88			0.88		0.88	0.88	0.88
C204	PIC	4.4		1.76	2.64	2.64	0.88	2.64			1.76	2.64	2.64	2.64	2.64	2.64
C205	BEL	3	0.6	1.2			0.6	1.2			0.6	1.2		1.2	0.6	1.2
C206	EMS	3	1.2				0.6	0.6	0.6							
C207	DLS	4			0.8	0.8	1.6	1.6			0.8	0.8				0.8
C208	WPD	4	0.8	0.8	1.6	0.8	0.8	0.8			0.8	0.8	2.4	2.4	2.4	2.4
C301	AMS	2.8	0.56	0.56			0.56	0.56	0.56	0.56	0.56	0.56				
C302	DSU	4.8	1.92	1.92	2.88	1.92	0.96	1.92			1.92	2.88	2.88	2.88	2.88	2.88
C303	ETE	4.8	1.92	1.92	2.88	1.92	0.96	1.92			1.92	2.88	0.96	2.88	1.92	1.92
C304	RDM	4.8	0.96	1.92	1.92	1.92	1.92	1.92	0.96		1.92	1.92	2.88	2.88	2.88	2.88
C305	DTE	4.4	0.88	1.76	1.76	1.76	1.76	1.76			0.88	0.88		1.76	2.64	1.76
C306	GUI	4		1.6	1.6	0.8	0.8	0.8		1.6	1.6	1.6	2.4	2.4	2.4	2.4
C307	PP	4				0.8	0.8	1.6			0.8	1.6				0.8
C401	EST	5	2	2	2	2	2	2	3	2	2	3				2
C402	CHM	4.8	0.96	2.88	2.88	2.88	1.92	1.92	0.96	1.92	1.92	2.88	2.88	2.88	2.88	2.88
C403	CNE	4.8	0.96	1.92	1.92	1.92	1.92	1.92	0.96	0.96	1.92	2.88	2.88	2.88	2.88	2.88
C404	MAP	4.8	0.96	0.96	1.92		0.96	0.96			2.88	2.88		0.96	0.96	
C405	OOP	4.8	0.96	1.92	1.92	2.88	1.92	1.92		0.96	1.92	2.88	2.88	2.88	1.92	2.88
C406	CGR	4	1.6	2.4	2.4	1.6	1.6	1.6			1.6	2.4	2.4	2.4	1.6	2.4
C407	PPT	4			0.8		1.6	2.4		0.8	0.8	0.8	0.8	0.8	0.8	1.6
C501	SWE	5		3	2	2	3	2	2	2	2	3	3	2	1	1
C502	JPR	4.6	0.92	1.84	2.76	1.84	2.76	2.76	2.76	2.76	2.76	2.76	0.92			0.92
C503	CSR	5		3	2	3	3	2	1	2	2	3	2	2	1	2
C504	OPS	4.6		2.76	2.76	2.76	2.76	1.84	0.92	1.84	2.76	2.76	2.76	2.76	2.76	2.76
C505	AMC	5		3	3	3	3	2	1	2	2	2	3	3	3	3
C506	NMA	4	0.8	2.4	2.4	1.6	2.4	2.4	0.8	2.4	2.4	2.4				0.8
C507	PPR	4	0.8	2.4	2.4	2.4	2.4	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4
C601	MAN	5	1	3	3	2	2	3	3	2	3	3				1
C602	STE	5			2	2	3	3	1	2	2	3			3	
C603	AJP	5		3	3	3	3	3	2	2	2	3	2	3	3	3
C604	EDP	5		3	3	3	3	3	2	2	3	3	3	3	3	3
C605	IPR	5		2	2	2	2	3	1	2	2	3	2	2	2	
C606	PPS	5		2	2	2	3	2	2	1	2	3	3	2	3	2
C607	EDS	5	3	3	3	3	3	3	3	2	3	3	3	3	3	2
Direct Attainment			1.53	2.11	2.21	1.98	1.86	2.00	1.47	1.73	1.83	2.19	2.28	2.09	2.01	1.98
80% Direct attainment			1.22	1.69	1.77	1.58	1.49	1.6	1.18	1.38	1.46	1.751	1.82	1.67	1.61	1.581
Indirect Attainment			3	3	3	3	3	3	3	3	3	3	3	3	3	3
20% of Indirect			0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
100% attainment			1.82	2.29	2.37	2.18	2.09	2.2	1.78	1.98	2.06	2.351	2.42	2.27	2.21	2.181
Attainment Level			3	4	4	4	4	4	3	3	4	4	4	4	4	4

CRITERION 4	Students' Performance	200

Intake Information:

Item	Academic Year 2015-2016	Academic Year 2014-2015	Academic Year 2013-2014
Sanctioned intake strength of the program (N)	60+3*	60+3*	60+3*
Total Number of students admitted through state level counseling (N1)	48+3*	47+3*	48+3*
Number of students admitted through Institute level quota(N2)	11	12	11
Number of students admitted through Lateral Entry(N3) (Direct Second Year)	12(Admitted in 16-17)	15(Admitted in 15-16)	16(Admitted in 14-15)
Total Number of students admitted in the program(N1+N2+N3)	62+12=74	62+ 15=77	62+16=78

* Students admitted under Tuition Fee Waiver Scheme (TFWS)

Transfer Students

Item	Academic Year 2015-2016	Academic Year 2014-2015	Academic Year 2013-2014
Number of students transferred to Third Year	8*+1**	-	
Number of students transferred to Second Year	12*	-	9***+2****

*Manohar Phalke Polytechnic

** L & T Institute

*** M. M. J Shah Polytechnic

**** NewJai Bharat Shishkan Prasarak Mandal's Shantiniketan Polytechnic

Year of entry	N1+N2+N3	Number of students who have successfully passed without backlogs in any year of study		
		I Year	**II Year**	**III Year**
CAY **2015-2016**	62+12	36/(58) ,DS-12, T-2		
CAY m1 **2014-2015**	62+15	40/(61),DS-15, T -12	39, DS- 4, T - 5	
CAY m2 **2013-2014**	62+16	35/(62), DS- 16	33, DS-6	32, DS-6, T -8+1
CAY m3 **2012-2013**	62+8	39/(61),DS-8, T-2	39, DS-3	39,DS-2
CAY m4 **2011-2012**	62+12	33/(60),DS-10, T - 8+2	31,DS-3, T -7+2	31,DS-3, T- 7+2

Year of entry	N1+N2+N3	Number of students who have successfully passed		
		I Year	**II Year**	**III Year**
CAY **2015-2016**	62+12	56/(58), DS-12, T- 2		
CAY m1 **2014-2015**	62+15	52/(61), DS-15, T-12	47, DS-10, T-6	
CAY m2 **2013-2014**	62+16	54/(62),DS-16	54,DS-10, T- 8+1	45, DS-7, T- 8+1
CAY m3 **2012-2013**	62+8	53/(61),DS-8, T- 2	53,DS-4 , T- 1	50, DS- 3
CAY m4 **2011-2012**	62+12	49/(60),DS-10, T- 8+2	48,DS-6, T- 8+2	47, DS - 5, T- 8+2

4.1. Enrolment Ratio (20)

Enrolment Ratio= (N1+N2)/N

Item	Academic Year 2015-2016	Academic Year 2014-2015	Academic Year 2013-2014
N	63	63	63
N1	48+3	47+3	48+3
N2	11	12	11
Enrollment Ratio ((N1+N2)/N)*100	**98.41%**	**98.41%**	**98.41%**
Average Enrollment=98.41%			

4.2. Success Rate in the stipulated period of the program (60)

4.2.1. Success rate without backlogs in any year of study (40)

$$SI = \frac{\text{No. of students who have passed from the program without backlog}}{\text{No. of students admitted in the first year of that batch and admitted in 2nd year via lateral entry}}$$

Average SI = Mean of success index (SI) for past three batches

Success rate without backlogs in any year of study = 40 × Average SI

(Including Transfer Case Students)

Item	Latest passed batch (2015 - 16)	Latest passed Minus1 batch (2014 - 15)	Latest passed Minus 2 batch (2013 - 14)
Total number of Students (admitted through state level counseling + admitted through institute level quota + admitted through lateral Entry) (N1 + N2 + N3)	87	71	82
Number of students who have passed without backlog in the stipulated period	47	41	43
Success Index	0.54	0.58	0.52
Average SI	0.55		
Success Rate	**21.89**		

4.2.2. Success rate in stipulated period (20)

$$SI = \frac{\text{No. of students who have passed from the program in the stipulated period of course duration}}{\text{No. of students admitted in the first year of that batch and admitted in 2nd year via lateral entry}}$$

Average SI = mean of success index (SI) for past three batches

Success rate = $20 \times$ Average SI

(Including Transfer Case Students)

Item	Latest Passed Batch (2015-16)	Latest passed batch minus 1 (2014 - 15)	Latest passed minus 2 batch (2013 - 14)
Total number of Students (admitted through state level counseling + admitted through institute level quota + admitted through lateral Entry) (N1 + N2 + N3)	87	71	82
Number of students who have passed in the stipulated period	61	53	62
Success Index (SI)	0.70	0.75	0.76
Average SI	0.73		
Success Rate	14.69		

4.3. Academic Performance in Final Year (15)

Academic Performance Level = 1.5 × Average API (Academic Performance index)

$$API = \frac{\text{Mean of the percentage of marks of all successful students in Final Year}}{10}$$

$$\times \frac{\text{successful students}}{\text{number of students appeared in the examination}}$$

Successful students are those who passed in all the final year courses

(Including Transfer Case Students)

Academic Performance	CAY (2015-16)	CAYm1 (2014-15)	CAYm2 (2013-14)
Mean of CGPA or mean percentage of all successful students(X)	73.55	71.19	68.94
Total number of successful students(Y)	61	51	62
Total Number of students appeared in the examination(Z)	73	55	71
API = x* (Y/Z)	6.15	6.60	6.02
Average API = (AP1 + AP2 +AP3)/3	6.26		
Academic Performance Level	**9.38**		

4.4. Academic Performance in Second Year (20)

Academic Performance Level = 2. 0 × Average API (Academic Performance index)

$$API = \frac{\text{Mean of the percentage of marks of all successful students in Second Year}}{10}$$
$$\times \frac{\text{successful students}}{\text{number of students appeared in the examination}}$$

Successful students are those who are permitted to proceed to the final year

(Including Transfer Case Students)

Academic Performance	CAY (2015-16)	CAYm1 (2014-15)	CAYm2 (2013-14)
Mean of CGPA or mean percentage of all successful students(X)	57.16	60.84	68.63
Total number of successful students(Y)	75	70	64
Total Number of students appeared in the examination(Z)	80	72	68
API = x* (Y/Z)	5.36	5.92	6.46
Average API = (AP1 + AP2 +AP3)/3	5.91		
Academic Performance Level = 11.82			

4.5. Academic Performance in First Year (25)

$$Academic\ Performance\ Level = 2.5 \times Average\ API\ (Academic\ Performance\ index)$$

$$API = \frac{Mean\ of\ the\ percentage\ of\ marks\ of\ all\ successful\ students\ in\ First\ Year}{10}$$

$$\times \frac{successful\ students}{number\ of\ students\ appeared\ in\ the\ examination}$$

Successful students are those who are permitted to proceed to the second year (Including Transfer Case Students)

Academic Performance	CAY (2015-16)	CAYm1 (2014-15)	CAYm2 (2013-14)
Mean of CGPA or mean percentage of all successful students(X)	64.44	67.93	62.23
Total number of successful students(Y)	55	53	51
Total Number of students appeared in the examination(Z)	62	60	58
API = x* (Y/Z)	5.72	6.00	5.47
Average API = (AP1 + AP2 +AP3)/3	5.73		
Academic Performance Level = 14.325			

4.6. Placement and Higher Studies (40)

$$Assessment\ Points = 40 \times \frac{(1.25X + Y)}{N}$$

where ,X is number of students placed in companies/ government sector

through on or off campus placement **Y = No. of students admitted to higher studies,**

N =Total number of final year students

Item	Latest passed batch (2015-16)	Latest passed Minus 1 batch (2014-15)	Latest passed batch Minus 2 (2013-14)
Total number of final year students(N)	77	61	79
Total Number of students placed in companies or Government Sector(X)	-	-	-
Number of students admitted to higher studies(Y)	62	52	60
1.25X + Y	62	52	60

Item	Latest passed batch (2015-16)	Latest passed Minus 1 batch (2014-15)	Latest passed batch Minus 2 (2013-14)
Placement Index: (1.25X +Y)/N	0.81	0.85	0.76
T = Average of (1.25X +Y)/N	0.81		
Assessment Points = 40 X T	**32.4**		

4.7. Professional Activities (20)

4.7.1. Professional societies / student chapters and organizing technical events (15)

ISTE Student Chapter:

The Indian Society for Technical Education is a national, professional, non-profit making Society registered under the Societies Registration Act 1860. In the year 1995, ISTE student and staff chapter of V.P.M."s Polytechnic was incepted. Students become member of this chapter since their entry in institute. ISTE chapter is that umbrella of institute which shelters, cares for and motivates the students to use their creative minds and their boundless imagination in the best possible way. The young, energetic, enthusiastic ISTE-members have always made their mark wherever they set their foot. And the result is ISTE-ITNU has been awarded the "Best Students' Chapter Award" Six times.

Year	Activity
2013-2014	Inauguration of ISTE Chapter activities. **Teachers Day Celebration** on **5th September 2013.**
	Engineer's Day Celebration and **Quiz competition** on **15th September 2013**.
	Poster Competition on the theme **Industrial Safety, Safety at Work Place, Computer Security** on **10th October 2013**.
	The Blood Donation camp was conducted in association with **Samarpan Blood Bank on 1st March 2014.**
	Women's Day was celebrated on 8th March 2014 under ISTE Chapter.

Year	Activity
2014-2015	Inauguration of ISTE Chapter activities. **Teachers Day Celebration** on **5th September 2014**.
	Engineer's Day Celebration and **Quiz competition** on **15th September 2014**.
	The Blood Donation camp was conducted in association with **HDFC Bank** and **Plasma Diagnostic on 5th December 2014**.
	ISTE Srinivasa Ramanujan Mathematics 2014-2015 (SRMC 14-15) Zonal level Competition was held at V.P.M's Polytechnic on **12th December 2014**Three staff members andNine Students participated in the competition. At the Zonal level **Ms. Ismat Fatima Rizvi** (1st),**Mrs. Sujata M. Gupte** (2nd) and **Ms. Amisha Mistry** received 3rdprize,From students section Mr. Gaurav Kadam received 1stprize.Mrs S. M. Gupte and Ms. Ismat Fatima Rizvi received National level prize ISTE,RMC 14-15)
	Swachtha Abhiyan on **20th December 2014**. Students and staff participated in a cleanliness drive around Thane railway station.
	Women's Day Celebration on **7th March 2015**. Guest **Mrs. Sujata Soparkar MD, Integrated Thane, Dr. Rashmi Karandikar, DCP, Thane** Dr. Rashmi Karandikar (DCP, Thane) spoke on protection of women and gave the message that Every women should be alert and have ability to protect herself. Mrs Sumedha. V. Bedekar had a informative and interactive session with the audience. Dr. Maithee M. Gadgil (Gynecologist) spoke on Importance of Health and Hygiene.
2015-2016	EPS Department celebrated **Renewable Energy Day** by conducting State Level Technical Paper Presentation Competitions on **21st August 2015.** Chapter was inaugurated on the occasion of Teacher's day, **5th September 2015.**
	On the Occasion of Engineers Day Celebration on **15th September 2015** ISTE Student Chapter organized Essay Competition, Poster presentation competition(Competition was held on the topics of Carbon foot print, space solar Technology,5 pen PC Technology, Mathematics of safety and Power point presentation competition((Competition was held on topics-Renewable energy Technology, Advancement in Engineering Field, 3D Password and Robotics.
	Received **ISTE Narsee Monjee Student Project Award** by Sharaddha Kamble, Vishal Raut, Mohak Bengale, Divyesh Jain students of **Third year**

Year	Activity
	Instrumentation department for the project **Thermostat Life Testing in October 2015.**
	VPM's Polytechnic along with **HDFC bank and Plama Blood Bank** conducted **Blood Donation camp** on **11th December 2015**. Third year engineering students and staff members of V.P.M's contributed for this noble cause.
	A programme on **Startup Entrepreneurship** - The journey begins!! was conducted by ED Cell on **26th January 2016.**Dr. V.V. Bedekar, Chairman, V.P.M**., Mr. Ram Bhogale**, Director, Nirlep Group of Companies and **Mr. Deepak Ghaisas**, currently Chairman of Gencoval Strategic services Pvt. Ltd., along with other guests inaugurated the programme.
	ISTE Chapter V. P. M's Polytechnic, Thane, cordially invited **Dr. RajendraAgarkar (Honorary Physician Tata Institute of Fundamental Research**. Colaba, Mumbai) Who is founder President Society for the prevention of **Hypertension and Diabetics Medical Adviser** addressed awareness lecture cum presentation on **6th March 2016.**
	Two programmes for **Women's Day celebration** on **8th March 2016** were conducted by **Mrs. Irravati Lagu, T.V. and Drama Artist, Mumbai** on **Life Risk Management and by Sisters of Prajapita Brahma Kumaris Ishwariya Vishwa Vidyalaya, Mulundon Rajyoga Meditation, Maintaining Stability in Turbulant Times, Women's empowerment.**
	On **27th March 2016**, **79 students and 3 Teachers** from V.P.M's Polytechnic were enrolled in **SRM Competition**. This Chapter level competition was held at Vivekanand Polytechnic, Chembur, Mumbai. 2 students from Third Year Industrial Electronics Department **Gaurav Vinay Kadam** and **Omkar Manohar Pawar** were succeed in **ISTE – SRMC – 2015-16 Chapter Level examination.** Student from Electrical Power System First Year **Shashikant Dilip Gharge** ranked in **National Level Merit** list **SRM Competition** 2015-16.

Entrepreneurship Development Cell:

Activity	Details of activity	Date	Beneficiary
Expert Lecture	"Entrepreneurship Opportunity for Engineers". by Mr. Pratapsinh K. Desai president ISTE New Delhi	10th September 2015	ED cell Members
Short term Course	Startup Entrepreneurship‖- The journey begins!! (72 Hrs)	26th Jan 2016	ED cell Members

4.7.2. Publication of technical magazines, newsletters, etc. (05)

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

List of Publications:

- College Magazine-Innovision – Yearly Publication

- Student Handbook - Yearly Publication

- Departmental Newsletter COgnizance – Semester-wise Publication

- Conference Proceedings – Yearly

- Seminar Proceedings - Yearly

Publication	Year of Publication	Issue No.	Date of release	Theme/ Content	Editorial Team
College Magazine	2015 - 16			Report of all the activities, Articles by students & Staff	Principal & Staff Members
	2014 - 15				
	2013 - 14				
Student Handbook	2015 - 16	-	Beginning of Academic Year	Oath, Institute Vision, Mission, Academic Calendar, Endowment Prizes	Principal
	2014 - 15				
	2013 - 14				
Newsletter COgnizance (Sent as E-	2016 - 17	01	Nov 2016	Welcome Issue 1	Mrs.Suhasini Shukla Mrs. Dipali Bhole

Publication	Year of Publication	Issue No.	Date of release	Theme/ Content	Editorial Team
Newsletter via Email)					
Conference Proceedings	2015 - 16	18	19th Dec 2015	**Life Safety – Today & Tomorrow**	Principal & Organizing Secretary of the Conference
	2014 - 15	17	7th Feb 2015	**Industry Expectations from Safety Managers**	
		16	16Th and 17Th Jan 2015	**Next Generation Electronics**	
	2013 - 14	15	4th Jan 2014	**Process Safety Management**	
Seminar Proceedings	2015-16	1	March 2016	**Tech Talk 2016,**	Department Staff

CRITERION 5	Faculty Information and Contribution	150

Faculty Information:

Year (2016-17)

Sr.No	Name of the Faculty Member	Qualification, Board and Year of Graduation	Designation and date of Joining the institution	Distribution of Teaching Load (%)			Academic Research		Years of experience	
				1st Year	2nd Year	3rd Year	Research Paper Publications	Faculty Receiving M.Tech/ Ph.D. during the Assessment Year	Acadamic	Industrial
1	Prof. D.K.Nayak	M.E.Comp,Mumbai University 1991	Principal, August 1985			1	Research-5 Conferences-12	Registered for Ph.D.	31	
2	Mrs. S.K.Shukla	M.Sc. (Electronics),Mumbai University,1989	HOD, July 1990			1	2		26	
3	Mrs. Dipali Bhole	M.E Comp,Mumbai University,2011	Lecturer, July 2006		0.84	0.16	4		10	
4	Ms Manisha Bhole	B.E Comp,Mumbai University,2010	Lecturer, August 2011		0.61	0.39	5	Pursuing M.E.	6	
5	Ms. Swati Tawade	B.E Comp,Mumbai University,2007	Lecturer, July 2014		0.84	0.16	3	Pursuing M.E.	3	
6	Ms. Poonam Wavare	B.E Comp,Mumbai University,2014	Lecturer, Dec 2014	0.45	0.55		1		2	
7	Ms Priyanka Joshi	M.E Comp,Mumbai University,2016	Lecturer, July 2016		0.4	0.6	2		1	
8	Mrs. Sneha Mandlik	B.E Comp Pune University 2012	Lecturer, July 2016		0.35	0.65	4	Pursuing M.E.	1	
9	Mrs Vishaka Pawar	M.E Comp, Pune University 2015	Lecturer, July 2016	0.45	0.22	0.33	1		4 Months	
10	Dr. Mrs. G. S. Ingawale	Ph. D JJT University 2015	Sr. Lecturer, August 1995	0.33			7		21	5.5
11	Mrs. Shreya Ghaisas	M.A. (English) Mumbai University 2004	Lecturer, August 2011	0.33					5	
12	Ms. Fatima Rizvi	M.sc. (Maths) Mumbai University 2009	Lecturer, August 2011	0..31	0.19				5	
13	Mrs. Neelima Warade	M. S. (Physics) Mumbai University 2004	Lecturer, August 2016	0.33					3 months	
14	Mrs Komal Tajane	B.E. (Mech) RTMN University 2013	Lecturer, June 2015	0.33			1		1	

Year 2015-16

Sr. No	Name of the Faculty Member	Qualification, Board and Year of Graduation	Designation and date of Joining the institution	Distribution of Teaching Load (%)			Academic Research		Years of experience	
				1st Year	2nd Year	3rd Year	Research Paper Publications	Faculty Receiving M.Tech/ Ph.D. during the Assessment Year	Acadamic	Industrial
1	Prof. D.K.Nayak	M.E.Comp,Mumbai University 1991	Principal, August 1985			1	Research-5 Conferences-12	Registered for Ph.D.	30	
2	Mrs. S.K.Shukla	M.Sc. (Electronics),Mumbai University,1989	HOD, July 1990	0.11	0.11	0.78	2		25	
4	Mrs. Dipali Bhole	M.E Comp,Mumbai University,2011	Lecturer, July 2006		0.63	0.37	4		9	
5	Mrs. Sonali S. Bhavsar	B.E. Comp,SRTMU,2004	Lecturer, July 2010		0.5	0.5	3		6	
6	Ms Manisha Bhole	B.E Comp,Mumbai University,2010	Lecturer, August 2011		0.72	0.28	5	Pursuing M.E.	5	
7	Ms. Sushama Borkar	B.E Comp,Mumbai University,2011	Lecturer, July 2013	0.19	0.44	0.37	2	Pursuing M.E.	3	
8	Ms. Swati Tawade	Pursuing M.E Comp,Mumbai University,2007	Lecturer, July 2014	0.41	0.54	0.05	3	Pursuing M.E.	6	
9	Ms. Priyanka Dongare	B.E Comp,Pune University,2013	Lecturer, July 2014		0.37	0.63	-	Pursuing M.E.	1	
10	Ms. Sneha Shete	B.E Comp,Mumbai University,2014	Lecturer, August 2014	0.2	0.49	0.31	2	Pursuing M.E.	1	
11	Ms. Poonam Wavare	B.E Comp,Mumbai University,2014	Lecturer, Dec 2014	0.53	0.1	0.37	1		6 Months	
3	Mrs. G. S. Ingawale	M.Sc (Chemistry) Mumbai University 1989	Sr. Lecturer, August 1995	0.33			6	Ph.D	20	5.5
12	Mrs. Shreya Ghaisas	M.A. (English) Mumbai University 2004	Lecturer, August 2011	0.33			-		4	
13	Ms. Fatima Rizvi	M.sc. (Maths) Mumbai University 2009	Lecturer, August 2011	0.33	0.19		-		4	
14	Ms. Harshada V. Nadgouda	M.Sc.(Energy Sci),Shivaji University,2012	Lecturer, Dec 2014	0.33			-		3	
15	Ms. Sheetal Jagtap	B.E Mechanical Shivaji University 2012	Lecturer, July 2014	0.33			1	Pursuing M.E.	2	

Year 2014-15

Sr. No	Name of the Faculty Member	Qualification, Board and Year of Graduation	Designation and date of Joining	Distribution of Teaching			Academic Research		Years of experience	
				1st Year	2nd Year	3rd Year	Research Paper	Faculty Receiving	Acadamic	Industrial
1	Prof. D.K.Nayak	M.E.Comp,Mumbai University 1991	Principal, August 1985			1	Research-5 Conferences-12	Registered for Ph.D.	29	
2	Mrs. S.K.Shukla	M.Sc. (Electronics),Mumbai University,1989	HOD, July 1990	0.11	0.13	0.76	2		24	
4	Mrs. Dipali Bhole	M.E Comp,Mumbai University,2011	Lecturer, July 2006		0.62	0.38	3		8	
5	Mrs. Sonali S. Bhavsar	B.E. Comp,SRTMU,2004	Lecturer, July 2010		0.61	0.39	-		5	
6	Ms Manisha Bhole	B.E Comp,Mumbai University,2010	Lecturer, August 2011		0.68	0.32	3	Pursuing M.E.	4	
7	Ms. Sushama Borkar	B.E Comp,Mumbai University,2011	Lecturer, july 2013	0.14	0.32	0.54	1	Pursuing M.E.	2	
8	Ms. Swati Tawade	B.E Comp,Mumbai University,2007	Lecturer, July 2014	0.24	0.32	0.44	1	Pursuing M.E.	5	
9	Ms. Priyanka Dongare	B.E Comp,Pune University,2013	Lecturer, July 2014	0.26	0.51	0.23	-		0.5	
10	Ms.Priyanka Lohot.	B.E Comp,Mumbai University,2007	Lecturer, July 2014	0.75		0.25	-	Pursuing M.E.	0.5	
11	Ms. Sneha Shete	B.E IT,Mumbai University,2014	Lecturer, August 2014		0.72	0.28	1	Pursuing M.E.	0.5	
12	Ms. Poonam Wavare	B.E Comp,Mumbai University,2014	Lecturer, Dec 2014	0.43	0.19	0.38	-		0	
3	Mrs. G. S. Ingawale	M.Sc (Chemistry) Mumbai University 1989	Sr. Lecturer, August 1995	0.33			5	Registered for Ph.D.	19	5.5
13	Mrs. Shreya Ghaisas	M.A. (English) Mumbai University 2004	Lecturer, August 2011	0.33			-		3	
14	Ms. Fatima Rizvi	M.sc. (Maths) Mumbai University 2009	Lecturer, August 2011	0.33	0.19		-		3	
15	Mrs. Raji Nair	M.Sc. (Physics) Mumbai University 2005	Lecturer, June 2007	0.33			2		9	
16	Ms. Sheetal Jagtap	B.E Mechanical Shivaji University 2012	Lecturer, July 2014	0.33			-	Pursuing M.E.	1	

Year 2013-14

Sr. No	Name of the Faculty Member	Qualification, Board and Year of Graduation	Designation and date of Joining the institution	Distribution of Teaching Load (%)			Academic Research		Years of experience	
				1st Year	2nd Year	3rd Year	Research Paper Publications	Faculty Receiving M.Tech/ Ph.D. during the Assessment Year	Acadamic	Industrial
1	Prof. D.K.Nayak	M.E.Comp Mumbai University 1991	Principal, August 1985			1	Research-5 Conferences-12	Registered for Ph.D.	28	
2	Mrs. S.K.Shukla	M.Sc. (Electronics),Mumbai University,1989	HOD, July 1990	0.11	0.13	0.76			23	
4	Mrs. Dipali Bhole	M.E Comp,Mumbai University,2011	Lecturer, July 2006		0.69	0.31	2		5	
5	Mrs. Sonali S. Bhavsar	B.E. Comp,SRTMU,2004	Lecturer, July 2010		0.47	0.53	2		5	
6	Mrs. Samrudhi Pitkar	B.E. (IE),Mumbai University,2006	Lecturer, Jan 2012	0.21	0.14	0.65			5	
7	Ms Manisha Bhole	B.E Comp,Mumbai University,2010	Lecturer, August 2011	0.1	0.68	0.22	2	Pursuing M.E.	3	
8	Ms Monali Patil	BE Comp,Mumbai University,2010	Lecturer, July 2013	0.1	0.78	0.12	-	Pursuing M.E.	1	
9	Mrs Suhasini Gunjal	B,E Comp, Pune University, 2011	Lecturer, July 2012		0.48	0.52	-	Pursuing M.E.	1	
10	Ms. Sushama Borkar	B.E Comp,Mumbai University,2011	Lecturer, july 2013		0.41	0.59	-		1	
11	Mrs Shradha Dherenge	B.E. Comp, Pune University, 2010	Lecturer, July 2013	0.58	0.26	0.16	-		1	
12	Mr. Pratik Kadam	B.E. I.T Mumbai University 2013	Lecturer, July 2013	0.42	0.42	0.16	-		1	
3	Mrs. G. S. Ingawale	M.Sc (Chemistry) Mumbai University 1989	Sr. Lecturer, August 1995	0.33			3	Registered for Ph.D.	18	5.5
13	Mrs. Raji Nair	M.Sc. (Physics) Mumbai University 2005	Lecturer, June 2007	0.33			1		8	
14	Mrs. Shreya Ghaisas	M.A. (English) Mumbai University 2004	Lecturer, August 2011	0.33					3	
15	Ms. Fatima Rizvi	M.sc. (Maths) Mumbai University 2009	Lecturer, August 2011	0.32	0.19				3	
16	Ms. Sheetal Jagtap	B.E Mechanical Shivaji University 2012	Lecturer, July 2014	0.33				Pursuing M.E	3 months	

5.1. Student-Faculty Ratio (SFR) (15) + Availability of HOD (5); (20)

S:F ratio = N/F; F = No. of faculty = (a + b − c) for every assessment year

a: Total number of full-time regular Faculty serving fully to All Years of this program b: Total number of full-time equivalent regular Faculty (considering fractional load) serving this program from other Program(s)

c: Total number of full time equivalent regular Faculty (considering fractional load) of this program serving other program(s)

N=No. of students First year approved intake + 2x (first year approved intake + 20% of lateral entry)

Year	N	F	SFR=N/F
2016-17	204	9.45	21.6
2015-16	204	10.42	19.6
2014-15	204	10.84	18.8
2013-14	204	11.17	18.3
Average SFR		10.81	18.9

5.2. Faculty Qualification (20)

FQ = 2* (10x +7y)/F where x is no. of faculty with M.Tech. and y is no. of faculty with B.Tech. F is no. of faculty required to comply 1:20 Faculty Student Ratio (no. of faculty and no. of students required to be calculated as per 5.1)

Year	Y (B.Tech)	X (M. Tech)	F	FQ = 2* (10X+7Y)/F
2016-17	6.12	3.33	9.45	16.11
2015-16	9.09	1.33	10.42	14.77
2014-15	8.84	1	9.84	14.61
2013-14	10.17	1	11.17	14.54

5.3. Faculty Retention (20)

Sr.No	Y 2016-17		Y 2015-16		Y 2014-15		Y 2013-14	
	Name of Faculty	Staff Weightage	Name of Faculty	Staff Weightage	Name of Faculty	Staff Weightage	Name of Faculty	Staff Weightage
1	Prof. D.K.Nayak	100%	Prof. D.K.Nayak	100%	Prof. D.K.Nayak	100%	Prof. D.K.Nayak	100%
2	Mrs. S.K.Shukla	100%	Mrs. S.K.Shukla	100%	Mrs. S.K.Shukla	100%	Mrs. S.K.Shukla	100%
3	Mrs. G. S. Ingawale	33%	Mrs. G. S. Ingawale	33%	Mrs. G. S. Ingawale	33%	Mrs. G. S. Ingawale	33%
4	Mrs. Dipali Bhole	100%	Mrs. Dipali Bhole	100%	Mrs. Dipali Bhole	100%	Mrs. Dipali Bhole	100%
5	Ms Manisha Bhole	100%	Ms Manisha Bhole	100%	Ms Manisha Bhole	100%	Ms Manisha Bhole	100%
6	Ms. Swati Tawade	100%	Ms. Swati Tawade	100%	Ms. Swati Tawade	100%	Ms Monali Patil	100%
7	Ms. Poonam Wavare	100%	Ms. Poonam Wavare	100%	Ms. Poonam Wavare	100%	Mr. Pratik Kadam	100%
8	Ms Priyanka Joshi	100%	Ms. Sushama Borkar	100%	Ms. Sushama Borkar	100%	Ms. Sushama Borkar	100%
9	Mrs. Sneha mandlik	100%	Ms. Priyanka Dongare	100%	Ms. Priyanka Dongare	100%	Mrs Suhasini Gunjal	100%
10	Mrs Vishaka Pawar	100%	Ms. Sneha Shete	100%	Ms. Sneha Shete	100%	Mrs. Samrudhi Pitkar	100%
11	Mrs. Shreya Ghaisas	33%	Mrs. Shreya Ghaisas	33%	Mrs. Shreya Ghaisas	33%	Mrs. Shreya Ghaisas	33%
12	Ms. Fatima Rizvi	50%	Ms. Fatima Rizvi	50%	Ms. Fatima Rizvi	50%	Ms. Fatima Rizvi	50%
13	Mrs. Neelima Warade	33%	Ms. Harshada V. Nadgouda	33%	Mrs. Raji Nair	33%	Mrs. Raji Nair	33%
14	Mrs Komal Tajane	33%	Ms. Sheetal Jagtap	33%	Ms. Sheetal Jagtap	33%	Ms. Sheetal Jagtap	33%
15			Mrs. Sonali S. Bhavsar	100%	Mrs. Sonali S. Bhavsar	100%	Mrs. Sonali S. Bhavsar	100%
16					Ms.Priyanka Lohat.	100%		

Number of Faculty Members Retained during the academic years 2013-14, 2014-15, 2015-16 and 2016-17 is 9.5

Percentage of staff retained is 9.5/10.81*100 =88%

5.4. Faculty as participants in Faculty development/training activities (30)

- A Faculty scores maximum five points for participation

- Participation in 2 to 5 days Faculty/faculty development program: 3 Point

- Participation >5 days Faculty/faculty development program: 5 points

Name of the Faculty	Marks		
	2013-14	2014-15	2015-16
Ms Monali Patil	3		
Mrs Suhasini Gunjal	3		
Mrs Shradha Dherenge	3		
Mr. Pratik Kadam	3		
Mrs. Sonali S. Bhavsar	3	5	
Mrs. Samruddhi.Pitkar	3		
Ms. Sneha Shete		3	
Ms.Priyanka Dongre			3
Mrs.D.K.Bhole	3	3	5
Ms.Swati Tawade			3
Ms.Sushma Borkar	3		3
Ms.Manisha Bhole	3		
Ms.Poonam S. Wavare.			5
Mrs. S. K. Shukla	3	5	3
Mrs. Priyanka Joshi			5
Sum	30	16	27
RF= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per 5.1	11.17	10.84	10.42
Assessment = 6 × Sum/0.5RF (Marks limited to 30)	32.23	17.71	31.09
Average assessment over three years (Marks limited to 30)	27.01		

**5.5 Product development, Consultancy, Manufacturing contracts, Testing contracts (20)
Consultancy**

Item	Name	Details	Year of Development	Beneficiaries
Product Development	**Networking Models**	• Network Cables, • Types of computer cables, • Types of interface cards	2013-2016	Students studying subjects CHM,CNE, Workshop, MAP
	Hardware Models	• Types of mouse, • Types of RAM, • Motherboards, • Printers, • CD/DVD-ROM	2013-2016	Students studying subjects CHM,CNE, Workshop, MAP
Consultancy	**Curriculum Development**	Faculty members of the department are involved in the Curriculum development of G scheme & I scheme of MSBTE.	2016-2017	Computer Group of Diploma Programmes, affiliated to MSBTE.
	Teacher Guide Development	Faculty members of the department are involved in the Teacher Guide development of G scheme and training faculty across the state.	2013-2015	Computer Group of Diploma Programmes, affiliated to MSBTE.

Item	Name	Details	Year of Development	Beneficiaries
	Laboratory Manual Development	Faculty members of the department are involved in the Review of Laboratory Manual prepared by subject experts for Diploma Programmes	2013-14	Computer Group of Diploma Programmes, affiliated to MSBTE.
	Model Answer Paper	Faculty members of the dept. are involved in the development of model Answer papers prepared by MSBTE as subject experts and moderator for Diploma Programmes	2013-2016	Computer Group of Diploma Programmes, affiliated to MSBTE.

Staff from Department of Computer Engineering conducts following courses

Sr. No.	Name of the course	Duration	2013-14	Revenue generated	2014-15	Revenue generated	2015-16	Revenue generated
1	KLIC Certificate course in financial Tally ERP 9.0	3 Months	5	17500	16	56000	34	119000
2	KLIC Certificate course in C Programme	3 Months	2	7000	13	45500	6	21000
3	KLIC Certificate course in C++ Programme	3 Months	0	0	0	0	1	3500
4	KLIC Certificate course in Web Designing	3 Months	0	0	0	0	3	10500
5	KLIC Certificate course in Advance Excel	3 Months	0	0	0	0	2	7000
6	KLIC Certificate course in Presentation Designing	3 Months	0	0	0	0	1	3500
7	KLIC Certificate course in Deskstop Publication (Coral Draw)	3 Months	0	0	0	0	1	3500
8	KLIC Certificate course in IT Hardware suppost	3 Months	0	0	0	0	1	3500

No. of Students Enrolled – CP and Revenue Generated

Academic Year	Students Enrolled	Revenue Generated (in Rs.)
2013-2014	0	0
2014-2015	18	225000.00
2015-2016	09	112500.00
2016-2017	08	100000.00

5.6 Faculty Performance Appraisal and Development System (FPADS)

5.6.1 A well-defined system implemented for all the assessment years

Polytechnic is following Performance Appraisal Development System with the following objectives

- Effective Teaching – Learning mechanism for each Course Theory and Practical.

- Ensure regular Teaching, Co-curricular and Extra-curricular activities.

- Faculty involvement for Guest lectures, Quiz, Technical Paper presentation, Project competitions and other Co-Curricular activities.

- Induction Training

- Content Updating Workshops

- Industrial Trainings

- Presenting Technical / Research papers in National and International Conferences.

- Publication of Journal Papers

- Guidance for Innovative, Application based projects

- Patents

- Specific Individual achievements

5.6.2   FPADS Implementation and Effectiveness

5.6.2.1 The Activity Flow Chart

Formulation	Issue of Self-Appraisal form	March
	Completion and Submission to HODs	End March
	Authentication and Evaluation by HOD	Mid April
Notification	Remarks of Principal Conveyed to respective Faculty	End April
	Compliance report from Individual Staff	June
Implementation	Monitoring Compliance by HODs	During Academic year
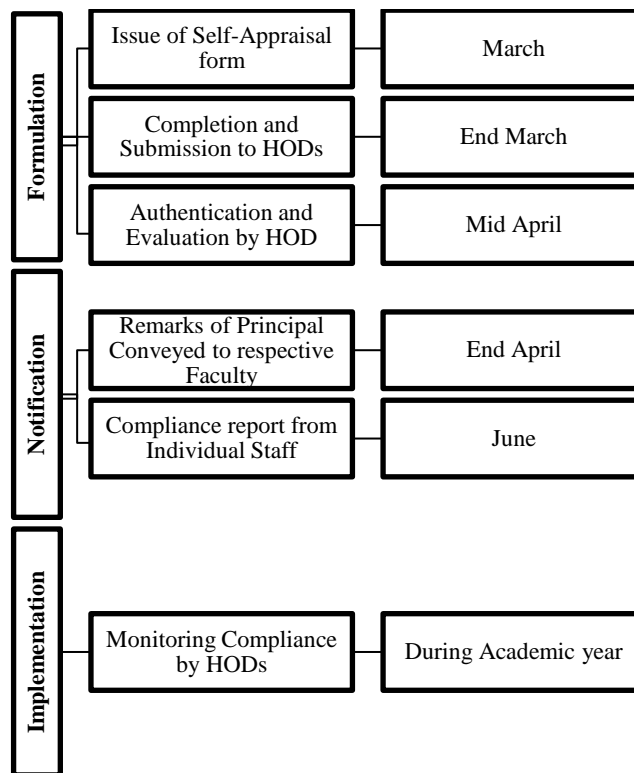
5.6.2.1 Key Performance Indicators in the Self-Appraisal

- Teaching and practical load details of Curricular, Co-curricular responsibilities

- Course Result Analysis

- Trainings / Workshops Organized/attended

- Conferences / Guest lectures Organized/ attended

- Conference Papers presented

- Journal Papers/ Books published

- Membership of Professional bodies

- Awards, Innovative Projects

- Skill Upgrades

- Student feedback

The Appraisals are evaluated on 100 point scale and observations are conveyed to the respective staff members.

5.6.2.2 FPADS implementation and its Effectiveness:

The Self-Appraisal forms submitted by Individual staff members includes Academic and Personal contributions of the academic year. The system helps in faculty accountability and the effect is visible in the below listed aspects.

Faculty:

- Staff aremade aware of their Role and Responsibilities.

- Teaching Plan with learning resources ready with every Teacher at the start of term.

- Inculcates Outcome Based Teaching Learning process culture.

- Motivation to participate in Content Updating as well as Industrial Training Activities.

- Facilitates participation of Teachers in Peer Reviewed Conferences.

- Encourages publication of Journal Papers.

- Participation of staff in MSBTE Curriculum Revision, Career Fair and other initiatives.

- Innovative practices in Teaching/learning, Use of ICT tools

- Motivating students for Co-curricular activities.

Institution:

- Better equipped and motivated human resource.

- Competent and Peer recognized faculty.

- Establishing credibility within the Student community and Society.

- Helps in achieving goals of the Organization.

- Establish State-Of-The-Art facilities.

- Ability to deal with the futuristic needs.

5.6.3 Qualification up-gradation of faculty:

For enriching academic performance and effectiveness Teaching and Support staff are regularly deputed to attend Certificate courses, Workshops, Content Updating Training Programme (CUTP), Industrial Trainings, Industrial Visits, Industry Sponsored Exhibitions and Conferences. Such events help the staff to remain updated for Curriculum Implementation.

Staff Development Activities

Sr. No	Activity	Total No. of Programmes attended		
		2013-2014	2014-2015	2015-2016
1	No. of Staff deputed for training organized by MSBTE/Industries	25	15	41
2	No. of Staff training programmes conducted	41	37	31
3	No. of Staff deputed for ISTE Summer / Winter STTP Schools or QIP centers	2	08	17
4	No. of Staff deputed for long / short course organized by NITTTR	12	06	04
5	No. of Staff deputed for other programmes (Conferences, Exhibitions, Career Fair etc.)	71	57	47
	Total	**151**	**123**	**140**

- The **Institute ISTE Chapter** is very active and organizes many programmes for staff and students. The **V.P.M's Polytechnic ISTE Chapter** received **Best Chapter Award among Maharashtra and Goa Section during the Year 2009**.

- **National Conferences organized by V.P.M's Polytechnic, Thane**

In view of inviting Industrial experts and give opportunity for publication of Conference papers, the institute organizes National Conferences every year. The event is announced a year in advance and Proceedings of the same are published during the Conference. The event receives adequate sponsorship and participation support from external delegates and students.

The list of Conferences conducted in the last 3 years are as under.

Sr. No.	Name of Conference	Date & Year	Supported By
1	**14**th One Day National Conference on **Emerging Trends in Solar Technologies**	5-1-2013	• Ministry of New and Renewable Energy, New Delhi
2	**15**thOne Day National Conference on **Process Safety Management**	4-1-2014	• Cinque Solution Pvt. Ltd, Andheri, Mumbai
3	**16**th Two Days National Conference on **Next Generation Electronics**	16-1-2015 17-1-2015	• BRNS Grant from BARC, Mumbai MSBTE, Mumbai
4	**17**th One Day Conference on **Industry Expectation from Safety Managers**	7-2-2015	• ACC Ltd., Thane • Safety Messenger, Mumbai • Canara Bank • TJSB Bank, • NKGSB Bank, • Netel Chromotographs, Thane
5	**18**th One Day National Conference on **Life Safety - Today & Tomorrow**	19-12-2015	• MSBTE, Mumbai • GP Parsik Bank • State Bank of India • Canara Bank • Eduforce, Mumbai
6	**19**th **One Day National Conference on Environment, Health & Safety**	17-12-2016	• MSBTE, Mumbai • GP Parsik Bank

5.7   Implementation of Career Advancement Scheme

The Career Advancement Scheme is implemented by following AICTE guidelines and individual performance, academic results, Publications and other KPI (5.6.2.1).

The Polytechnic encourages all the staff members to take part in Career Advancement to upgrade qualifications. This will enable them to improve the Classroom / Laboratory performance as well as competency levels. The staff members including support staff approach the HOD / Principal at the start of academic year with their interest for enrolment to

the PG / Advance Diploma programmes. The Academic load of such staff is adjusted to suit to their commitments. The list of faculty members who upgraded their qualification in the last 3 years is included in the table.

Qualification	2015-2016		2014-2015		2013-2014		2012-2013	
	In Process	Completed	In Process	Completed	In Process	Completed	In Process	Completed
Ph.D.	2		2	1	3	-	3	1
M.E./M.Tech	1	1	17	3	16	-	7	2
Energy Manager	-	-	-	-	-	-	-	1
CP/ IT	5	2	-	5	-	-	-	-
MS-CIT	-	-	-	-	-	3	-	7
Total	**8**	**3**	**19**	**08**	**18**	**03**	**10**	**11**

Staff Member Pursuing /Completed M.E. /Ph.D. (10)

Sr. No.	Name of Staff	Department	Year of Admission	Qualification	Completed Year
1	Prof. D.K. Nayak	Computer Engineering	2010-2011	Ph.D.	Thesis submitted 2015 - 2016
2	Mrs. Diplali Bhole	Computer Engineering	2008-2009	M.E.	2011-2012
3	Dr. Mrs. G.S. Ingawale	Chemistry	2011-2012	Ph.D.	2015 - 2016
4	Ms. Manisha J. Bhole	Computer Engineering	2013-2014	M.E	In Progress 2016 - 2017
5	Ms.PriyankaLahot	Computer Engineering	2014-2015	M.E.	Left the Polytechnic
6	Ms.Sneha D.Shete	Computer Engineering	2014-2015	M.E.	Left the Polytechnic
7	Ms.Suhasini Gunjal	Computer Engineering	2013-2014	M.E.	Left the Polytechnic
8	Ms.Monali Patil	Computer Engineering	2013-2014	M.E.	Left the Polytechnic

Sr. No.	Name of Staff	Department	Year of Admission	Qualification	Completed Year
9	Ms. Priyanka Dongre	Computer Engineering	2015-2016	M.E	Left the Polytechnic
10	Mrs. Swati S.Tawade	Computer Engineering	2014-2015	M.E.	In Progress 2016-2017
11	Ms. Sushma Borkar	Computer Engineering	2014-2015	M.E.	In Progress 2016-2017

CP/IT (ADCSSA)

Sr. No.	Name of Staff	Department	Year of Admission	Qualification	Completed Year
1	Ms. Komal Durgavale	Computer Engineering	2014-2015	ADCSSA	2014-2015
2	Ms. Archana Aher	Computer Engineering	2014-2015	ADCSSA	2014-2015
3	Mrs. Vibhavari Ikhe	Computer Engineering	2014-2015	ADCSSA	2014-2015

CRITERION 6	Facilities And Technical Support	100

6.1. Availability of adequate, well-equipped classrooms to meet the curriculum requirements (10)

Room description	Legend Name	Area (sq. m)	Available facility
CLASS ROOM	SCIC 19	80	Black board, Benches, Fans, Lights, LAN
	SCIC 20	80	Black board, Benches, Fans, Lights, LAN
	FCIC 10	60	Black board, Benches, Fans, Lights, LAN
TUTORIAL ROOM	FCIT05	40	Tables , chairs, Lights, Fans

6.2. Availability of adequate, well-equipped workshops to meet the curriculum requirements (10)

Name of workshop	Area (sq. m)	No. Of Students	Available Important Equipment	Name of staff
Basic workshop practices	70	58	PC, Scanner, Printer, Motherboard, Expansion cards, Projector, Peripheral devices, Cables(CO-axial, Twisted pair), Speaker, Headphone, DVD Writer	Mrs. Vishakha A. Pawar

Computer workshop for FYCO conducted in hardware lab (CO LAB 2)

6.3. Adequate and well equipped laboratories and technical manpower (30)

Sr.No.	Name of the Important Equipment		Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
	Hardware	Software			Name of the Technical Staff	Designation	Qualification
Name of the Laboratory: Linux Lab							Batch size :20
1	PC- Intel H61(1), core i3 processor pc(11), IBM Thinkpad Laptop(1), PC- Intel DG 31 PR(2),PC - Intel DG 31PR with DVD Writer (1), HP Laserjet 1020 Printer(1), Intel core processor PC(4 gb ram(2), Intel core processor PC(4 gb ram (1)Patch panel 24 port D link, patchcords, Switch Cisco SRW22464	Ubuntu professional 15.10	32	JPR,OS,DS,AJP, PRJ,PIC	Ms. .Komal Durgavale	Lab Assistant	Diploma in I.T, ADCSSA, Pursuing B.Sc. (IT)

Sr.No.	Name of the Important Equipment		Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
	Hardware	Software			Name of the Technical Staff	Designation	Qualification
Name of the Laboratory:Networking Lab							Batch size :20
2	PC- Intel H61(1), core i3 processor pc(11), IBM Thinkpad Laptop(1), PC-Intel DG 31 PR(2),PC - Intel DG 31PR with DVD Writer (1), HP Laserjet 1020 Printer(1), Intel core processor PC(4 gb ram(2), Intel core processor PC(4 gb ram (1)Patch panel 24 port D-link, patchcords, Switch Cisco SRW22464	Windows server 2008 R2,Windows XP Netbeans,XP oracle 9i,Turbo c, Jdk 1.7, MSBTE CAD	34	RDBMS,NMA,CS, JPR,AJP,STG,PRJ, CNE,CHM,LPR, EGG	Mrs. V.S. Ikhe	Lab Assistant	Diploma in Computer Engg. ADCSSA

Sr.No.	Name of the Important Equipment		Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
	Hardware	Software			Name of the Technical Staff	Designation	Qualification
Name of the Laboratory:Software Engineering Lab							Batch size :20
3	PC- Intel H61(1), core i3 processor pc(11), IBM Thinkpad Laptop(1), PC-Intel DG 31 PR(2),PC - Intel DG 31PR with DVD Writer (1), HP Laserjet 1020 Printer(1), Intel core processor PC(4 gb ram(2), Intel core processor PC(4 gb ram (1)Patch panel 24 port D-link, patchcords, Switch Cisco SRW22464	Windows XP VB6, Windows XP Netbeans, Turboc,Jdk 1.7,Centos, MSBTE CAD, Ms-Office 10, Visual Studio 10	34	CGR,AMI, JPR, STE, PWV,GUI,DSU, OOP,MAP,AJP, PRJ,EGG	Ms. Tehseen Shaikh	Project Assistant	B.Sc., ADCSSA,CCP

Sr.No.	Name of the Important Equipment		Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
	Hardware	Software			Name of the Technical Staff	Designation	Qualification
Name of the Laboratory:Hardware Lab							Batch size :20
4	PC- Intel H61(1), core i3 processor pc(11), IBM Thinkpad Laptop(1), PC-Intel DG 31 PR(2),PC - Intel DG 31PR with DVD Writer (1), HP Laserjet 1020 Printer(1), Intel core processor PC(4 gb ram(2), Intel core processor PC(4 gb ram (1)Patch panel 24 port D-link, patchcords, Switch Cisco SRW22464	Windows XP VB6, Windows XP Netbeans, Turboc,Jdk 1.7,Centos, MSBTE CAD, Ms-Office 10, Visual Studio 10	32	CHM,CNE, MAP,PRJ,AMI, GUI	Ms. .Komal Durgavale	Lab Assistant	Diploma in I.T, ADCSSAA, Pursuing B.Sc. IT

Sr.No.	Name of the Important Equipment		Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
	Hardware	Software			Name of the Technical Staff	Designation	Qualification
Name of the Laboratory:Basic Workshop & Hardware Lab							Batch size:30
5	PC-Thinclient machines (10), D-Link 24 port switch	Microsoft Windows, MS OFFICE	26	CMF,WPD, PIC,DS,OOP	Ms. Archana Aher	Lab Assistant	Diploma in Computer Engineering,BSc IT, ADCSSA

Sr.No.	Name of the Important Equipment	Weekly utilization status	Name of course for which lab is utilized	Technical Manpower support		
				Name of the Technical Staff	Designation	Qualification
Name of the Laboratory: Physics Lab						Batch size:20
6	Barometers, Mulitimeter, Power supply, physical balance, Thermocouple, Spectrometer, Tunning fork set, Rheostat Ammeter, Galvanometer, Voltmeter, Searle's apparatus , Travelling Microscope,Vernier caliper, Micrometer, Steamgenerator,Potentiometer,Burisen photometer	30	BPH, APH	Ms. M.M.Tatke	Lab Assistant	B.Sc.
Name of the Laboratory: Chemistry Lab						Batch size:20
7	Magnetic stirrer, Phmeter ,Kipp's Appratus, Fumace Oven, Voltmeter, Titration Appratus,Conductivity meter	30	BCH, ACH	Mrs. V.D.Naik	Lab Assistant	B.Sc.

6.4. Additional facilities created for improving the quality of learning experience in Laboratories (20)

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which expected to have enhanced learning	Relevance to POs/PSOs
1.	Online Exam	CMF,EVS, MNG, AJP	MSBTE EXAM	3 LAB (around 12 days)	CMF, EVS, MNG,	PO1,PO5, PO7,PO8, PO10

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which expected to have enhanced learning	Relevance to POs/PSOs
					AJP	
2	Spoken Tutorial	C,C++, JAVA, Linux, CMF	IIT Bombay online test	3 LAB (around 4 days)	C,C++, JAVA	PO1,PO7, PO8,PO10
3	EMD Arduino	Training	Project Requirement	Third Year students do their projects in Arduino	Third Year Projects	PO2,PO3 ,PO4,PO8,PO10, PSO1, PSO2, PSO3, PSO4
4	SAP	Training	To improve Future Prospects	Third Year students	Entrepreneur Development Skills	PO1,PO2, PO3,PO4, PO8,PO10,PSO1, PSO3, PSO4
5	.Net	Training	Project Requirement	Third Year students do their projects in .NET	Third Year Projects	PO1, PO3, PO4, PO8, PO10, PSO1, PSO3, PSO4
6	Pictorial/ Graphics/ Charts	Subjective Charts available for learning	To convey message efficiently by visual	Charts give clear idea of the device	DTE, CHM, ETE, CNE,	PO1,PO2, PO3, PO4, PO6, PO8, PO10, PSO1,

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which expected to have enhanced learning	Relevance to POs/PSOs
			display		DSU, BEL	PSO2
7	Demo Kits	Simple Electronic circuits	To study simple electric circuit theory	Performing experiments becomes easier with demo kits	BEL, ETE, BEL, CNE	PO3, PO6, PO8, PO10, PSO1, PSO2, PSO4
8	Internet facility	Leased lines of InTech with a speed of 32 mbps to connect all devices to internet in the campus	Keep in touch with latest technology, surfing on internet for a specific problem	Conduct online Exams, Spoken tutorial, Professional practices, Assignment	CMF, PIC, OOP, JPR, MNG, EVS, IPR	All POs and PSOs
9	Departmental Library	674 books , CDs, Black Books available for reference	Deep knowledge of concept using a reference book ,scholarly	Issue book to a student for specific period	All Subjects	All POs and PSOs

Sr. No.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which expected to have enhanced learning	Relevance to POs/PSOs
			papers & CD/DVDs			
10	Laptop		Presentation	Presentation	Life Skill Development & Technology Relevant	PO1, PO2,PO3, PO4,PO5
11	LCD projector		Presentation	Presentation	Life Skill Development & Technology Relevant	PO1, PO2,PO3, PO4,PO5

Additional Labs created

Sr. No	Name of laboratory	Reason	Year of Development	Material procured	Cost
1	Hardware Lab	Extra Lab was necessary for additional	2013-2014	I/O plates with Mount Boxes and	RS. 12500/-

2	CO Lab 4	students		24 port switch	
2	CO Lab 4	Extra Lab was necessary for additional students	2015-2016	Switch, Patch panel, I/O plates	RS. 61000/-

6.5. Laboratories: Maintenance and overall ambiance (10)

Computer Engineering Department Usage Policy

For use of computing facilities at Polytechnic Labs, student should strictly follow the following guidelines

- No Student should try to install any software on any machines within institute

- Access of face book, You Tube,Twitter and prohibited in punishable

- The institute machine is public machine and using it for confidential online transaction is an offence.

- Use of pen drives that may tamper important data in machine is an offence

- Only safe, secure, authentic& trusted web sites should be accessed

(Self-Explanatory)

- Maintaining record of utilization of resources.

- Timely update and upgrade software and hardware.

- Maintaining record of scrap.

- One Teaching faculty and lab assistant are in-charge of the overall maintenance of lab.

- Maintain student entry register.

- A dead stock register is maintained with all equipment details recorded timely.

- Issue register is maintained to record the issue details of equipment's/facilities in and out of the laboratories

- As per requirement minor repairs are carried out by the lab assistants and faculty members.

6.6. Availability of computing facility in the department (10)

No. of Computer terminals	Students Computer Ratio	Details of Legal Software		Details of Networking	Details of Printers, Scanners etc.
50	1:2 (Per computer two students)	**System Software** Windows 7 Professional Windows 8 Enterprise Windows Server 2003 Windows Server 2008 Data Centre Windows XP Professional UBUNTU Operating System	**Application Software** Office 2003 Office Professional Plus 2007/ 2010/2013 Visual Studio 2005/ 2006/ 2010 Oracle, Eclipse, Netbeans, TASM, Dosbox, Quick Heal End point Security 15,MSBTE Auto CAD,TC, Putty Java, CrypTool 2 Email Tracker PRO	32 Mbps Intech Leased line connection ,all PC's connected in LAN Ethernet with 100 Mbps .Wi Fi access points availability with limited access	3 Printers 1 Scanner

6.7. Language lab (10)

(CO LAB 5 Vaze lab used as language lab)
(Availability and Utilization)

Language Lab

No. of Computer Terminals	Student Computer Ratio	No. of hours per week	Beneficiaries
10	2:1	02	All FY Students

Details of Learning Resources

Sr. No	Skill	Resources Available	No. of CD
1	Vocabulary	**Mega English Course** Effective Word power and Right Expression, Franklin International www.mindpowerindia.com	CD 1 to 4
2	Expressions	**Mega English Course** Effective Word power and Right Expression Franklin International www.mindpowerindia.com	CD 1 to 4
3	Spoken English	**Mind Power Spoken English Institute** Spoken English and Effective Communication (with Spoken English and Effective Communication Book)	CD 1 to 2
		Mega English Course Spoken English (with Spoken English Practice Book)	CD 1 to 2
4	Presentation Skills	Video of Presentations	Oxford University Press - CD
5	Body Language	CDs on Personality Development and Soft Skills	Oxford University Press - CD
6	Listening Skills	CDs on Enhancing Listening & Conversational Skills.	Oxford University Press - CD

Activities Conducted

- Make posters depicting different aspects of body language & write an assignment on the same

- Role play or Skit presentation (4to 5 students)

- Diagrammatical representation of communication cycle using 8 to 10 different communication situations and stating the different elements involved in it.

- Graphical communication using pie chart and bar graph.

- Describing 2 technical objects.

- Group Discussion, Job Interviews, Body Language & Presentations.

Utilization of Language lab

For Communication Skills

Academic Year (2015-16)

DAY/TIME	10-12	12.30-2.30	2.45-4.45
MON	IS/MU	EPS	CO
TUE	IS/MU	EPS	CO
WED	IS/MU	EPS	CO
THUR	-	IE	IF
FRI	IF/CH	IE	IF

CRITERION 7	Continuous Improvements	75

7.1. Actions taken based on the results of evaluation of each of the POs & PSOs (25)

PO

POs	Target Level	Attainment Level	Observations
• **PO1: Demonstrate the knowledge of mathematics, science and engineering.**			
PO1	4	3	Students are weak in Mathematics. It is observed that they do not attempt complete question paper.
Action1: Every weak additional lectureare allotted to solve problems in mathematics. Action2: Students are asked to write formulae repeatedly. Action3: For weak students remedial lectures are arranged after completion of syllabus.			
• **PO2: Demonstrate the ability to apply computer engineering – specific knowledge to solve core and applied engineering problems.**			
PO2	5	4	It is found that students find it difficult to correlate theory with practical and interpret the results in hardware based subjects like Basic Electronics & Digital Techniques.
Action 1: Subject teacher explains the students the relation between theory and practical. Action 2: For simple topics and experiments, the students are encouraged to explain the relation.			
• **PO3: Demonstrate the ability to design and conduct experiments, interpret and analyze data and report results.**			
PO3	5	4	The students are not able to link the connection between the software learnt with the needs of a live problem. It is also found that the students do not have domain knowledge of the problem.
Action: Students are given more exposure to live projects through the use of various applications and developing the code.			

POs	Target Level	Attainment Level	Observations
PO4:Demonstrate the ability to model a live problem or a project that meets desired specifications and requirements using appropriate tools			
PO4	**5**	**4**	The students are not able to identify a tool that they can choose in a particular situation. They are not able to develop /debug the source code.
Action1: Students are made aware of different hardware and software tools that can be used. Action2: They are taught techniques available to test the codes.			
• **PO5:Demonstrate the ability to understand the impact of engineering on society, health, safety and legal issues and incorporate them in engineering solutions.**			
PO5	4	3	It is observed that students feel they are overburdened in diploma education as they are not able to manage resources effectively.
Action1: Guest Lectures are conducted on topics such as time / stress management. Action2: Different techniques are taught to students to effectively manage their time and studies. Action3: A well planned semester makes it easier for the students to complete their tasks in the given time.			
• **PO6Demonstrate the ability to judge the impact of engineering solutions on the environment to achieve sustainable development.**			
PO6	**5**	**4**	New developments are taking place in the field of engineering, having great impact on environment.
Action 1: Students are made aware of various aspects of environmental damage that can happen as an impact of engineering solutions. Action 2: Students are also made aware of health hazards. Action 3: Students are encouraged to use recycling techniques and are taught composting techniques.			
• **PO7Demonstrate an understanding of their professional and ethical responsibilities in engineering field.**			
PO7	**4**	**3**	Students tend to use materials created by others

POs	Target Level	Attainment Level	Observations
Action 1: Students are encouraged to complete one month internship after completion of second and third year so as to make them understand their professional and ethical responsibilities.			
• **PO8:Demonstrate the ability to function in multidisciplinary or diverse environment as a member or leader of the team.**			
PO8	4	3	Students get confused in multidisciplinary environment.
Action 1: Students get to work in different environments such as Windows, Ubuntu/ Linux etc. Action 2:Students are taught about diverse environments in the curriculum.			
• **PO9:Develop the ability to communicate effectively with both verbal and written fluency.**			
PO9	4	3	Majority of the students are from vernacular media. They are weak in communication.
Action1: Importance is given on improving the communication skills. Action2: Activities such as group discussion, role play, Extempore etc.are conducted. Action3: Students are encouraged to participate in activities such as technical paper presentation, group discussion etc.			
PO10:Develop the ability to engage in independent and lifelong learning to adapt technological change.			
PO10	5	4	The field of Computer Engineering is forever changing field. For better career prospects, students need to keep learning about the latest developments.
Action1: Students are introduced to the latest developments in the Computer Engineering field. Action2: Activities such as Spoken Tutorial are introduced to make self-learning interesting.			
PSOs			
PSO1:Identify problems and find solution in programming/Networking			
PSO1	5	4	Due to lack of logical thinking, students are not

POs	Target Level	Attainment Level	Observations
			able to write correct programs. They also are not able to implement solution to a problem in networking

Action1:

PSO2:Identify and use hardware and software tools.

PSO2	5	4	Students are not able to choose correct hardware or software tools.

Action1: Students are made aware of use of different tools.

Action 2: They are taught about handling different hardware or software and testing tools.

PSO3:Test, Debug and troubleshoot the developed solution to the problem.

PSO3	5	4	Students are not able to write correct programs in the paper. They are not able to attempt MCQs correctly.

Action1: Practice is given to students to develop, debug and test the programs.

Action2: MCQ solving sessions are conducted at the end of each laboratory session.

PSO4:Provide assistance to identify and solve problems at client site.

PSO4	5	4	Because of weak knowledge about fundamental and advanced skills, students are not able to solve problems at client site.

Action 1: Students are taught the importance of fundamental knowledge.

Action 2: Live problems are discussed with students so as to help them in solving problems at client site.

7.2 Improvement in Success Index of students without backlog (10)

Items	LPB* (2015-16)	LPBm1 (2014-15)	LPBm2(2013-14)
Success Index (From 4.2.1)	0.54	0.58	0.52

Latest Passed out batch and m1 & m2 indicate Minus one year and Minus 2 years

respectively

SI

$$= \frac{\text{No. of students who have passed from the program in the stipulated period of course duration}}{\text{No. of students admitted in first year of that batch and admitted in second year via lateral entry}}$$

Assessment shall be based on improvement trends in success indices. Marks are awarded accordingly.

7.3 Improvement in placement and higher studies (10)

Assessment is based on improvement in:

- Placements: Number, quality placement, core industry, pay packages etc.

- Higher studies: admissions in premier institutes

Items	LPB* (2015-16)	LPBm1 (2014-15)	LPBm2(2013-14)
Placement Index (From 4.6)	0.89	0.85	0.76

7.4 Improvement in Academic Performance in Final Year (10)

Assessment is based on improvement in:

Items	LPB* (2015-16)	LPBm1 (2014-15)	LPBm2(2013-14)
Academic Performance Index (From 4.3)	6.15	6.60	6.02

7.5 Internal Academic Audits to review complete academics and to implement corrective Actions on continuous basis (10)

Items	CAY (2015-16)	CAYm1(2014-15)	CAYm2(2013-14)
Internal Academic Audits	88	82	76

7.6 New Facility created in the program (10)

Items	CAY (2015-16)	CAYm1(2014-15)	CAYm2(2013-14)
New Facility created	• Area for group studies • Spoken Tutorial • Mentoring • In plant Training • Hardware &	• Spoken Tutorial • Hardware & Networking Models • Group Email id's collected for E-	• Hardware and Networking Models • Group Email Id's collected for E- sharing

	Networking Models	sharing	
	• Group Email id's collected for E-sharing		
	• Bio-compost bin		

CRITERION 8	Student Support System	50

8.1 Mentoring system to help at Individual Level (10)

Polytechnic has an established Mentoring System to take care of the students for their Academic, Personality development and to make them best suited to the professional career. The admitted students are from different strata of the society and at times go through difficulties. Class teachers keep a close watch on individual student's behavior along with other mentors to check the need for assistance. Counseling to done at the personal level, through the Counselor appointed by the Institute to get the student back in to main stream learning and overcome problems faced. Motivational lectures are regularly held to maintain learning enthusiasm amongst students. Students groups are formed for studies to improve confidence and performance levels.

Type of Mentoring: Professional guidance/career advancement/course work specific/Laboratory specific/All-round.

Number of Faculty Mentors: 9 per Department

Number of students per Mentor: 20 per mentor

Frequency of Meeting: Monthly

- Each student division has two class teachers to plan and monitor Curricular, Co-curricular and Extra-curricular activities.

- Student attendance and Progressive test records are presented during the Parents meeting (twice in the term).

- Remedial/Paper solving sessions are conducted towards the end of term for improving academic performance.

- In case of students facing Concentration or Personality related problems they are guided to the Student-Counselor appointed by the Polytechnic.

- Every effort is made for all-round personality development of students enrolled for learning.

  Mentoring System: A Proctor Diary is maintained for each student with following details.

- Personal Information

- Previous Record

- Academic Performance

Professional Guidance:

The departments are well equipped with knowledgeable Human resources in the form of members of faculty who by keeping themselves of developments offer guidance to the students in addition to the classroom teaching.

Theory:

The theory subjects are taught by the respective teachers with complete preparation of the subject. This includes teaching plan, notes, PPT/Transparencies, Question Banks, Assignments and Tutorials. Faculty refer standard textbooks as well as e-learning resources to enable effective learning amongst students. Additional inputs are obtained through Training/Content Updating Programmes attended by the teachers. Regular assignments after each Chapter, helps the students to understand and remember the expected concepts for necessary skills. The latest advances in the respective subjects are preferably covered through industry expert guest lectures.

Laboratory:

Diploma programmes Curriculum designed by MSBTE has about 40 % weightage to Theory subjects and 60% to the Practical. This approach is very much useful for skill development to acquire adequate expertise.

The Laboratories are well equipped to perform the experiments including additional ones designed by the Subject Teachers.

The list of experiments as per the curriculum needs are identified at the start of the Semester and the students are introduced to the laboratory.

The introduction of cycle of practical is provided before the conduct of experiments. Experiments are performed by a group of 2-3 students. The experimental results are verified andassessed on continuous basis.

Subject teachers design additional experiments/Mini projects for beyond the Curriculum coverage andcomplete understanding of the subject.

All-Round Development:

The Curriculum is developed by keeping in focus the overall Personality development for acquiring necessary skills. Each course has scope for Theory sessions, Practical, Assignments, Tutorials and Presentations by students. The subjects such as Communication skills, Development of Life Skills, Professional practices help the students to participate in curricular and co-curricular activities.

8.2 Feedback analysis and reward / corrective measures taken, if any (10)

Feedback collected for all courses: YES/NO

- Feedback is collected within few weeks into the Semester to permit adequate time to ensure improvement (if necessary) in performance of teachers.

- Feedback of all subject teachers is taken to monitor student's acceptance.

- Feedback Questionnaire is given and explained to the participating students.

- Collected Feedback Questionnaire is scrutinized by the Head of department.

- The feedback is quantified.

- All the parameters mentioned in the feedback form are analyzed.

- Teaching abilities with respect to each item and comprehensive ability of the teachers is analyzed. All the comments of the students in the feedback formare communicated to the respective faculty members along with their feedback score to know strengths / weaknesses and to improve teaching skills.

- The Indices obtained and areas for improvement are informed to subject teachers by respective HOD's.

- Feedback mechanism is focused to ensure best Teaching Learning practices.

Teachers Feedback Analysis - Average percentage of students who participate:

Academic Year	CH		EP		IE		IS		IF		CO		MU		Total	
	T	C	T	C	T	C	T	C	T	C	T	C	T	C	T	C
2012-13	11	2	16	0	14	1	10	2	12	0	16	0	12	0	**95**	**5**
2013-14	11	2	15	0	14	0	16	1	12	1	16	0	12	0	**100**	**4**
2014-15	11	1	16	0	13	0	15	1	12	0	16	0	11	0	**98**	**2**
2015-16	11	2	15	0	13	0	15	1	12	1	16	0	10	0	**96**	**4**

- **T - Total Staff including Humanities**

- **C - Corrective Action Taken**

Basis of Reward / Corrective measures

Departments ensure availability of teachers for every course at the start of academic year. Complete Course plan and notes of the respective subjects are kept ready by the teachers. The freshly introduced teachers attend Two day workshop(InductionTraining) by the Principal and HOD's to understand the basics of Effective Teaching. Monthly meeting of staff members is held on first Saturday of every monthto provide important inputs and improve interaction among the staff members. The staff members with 100% result in Winter &

Summer MSBTE Theory subjects are felicitated for their achievement on 5th September of subsequent year.

Reward for Better Performance- Certificate of Appreciation (100% Result)

Sr. No.	Course Name	No. of Staff Members			
		2012-2013	2013-2014	2014-2015	2015-2016
1	Chemical Engineering	1	0	1	3
2	Computer Engineering	3	0	6	3
3	Electrical Power System	2	3	0	1
4	Industrial Electronics	3	1	6	0
5	Information Technology	3	1	5	3
6	Instrumentation	5	0	6	3
7	Medical Electronics	4	4	8	6
	Total	**21**	**9**	**32**	**19**
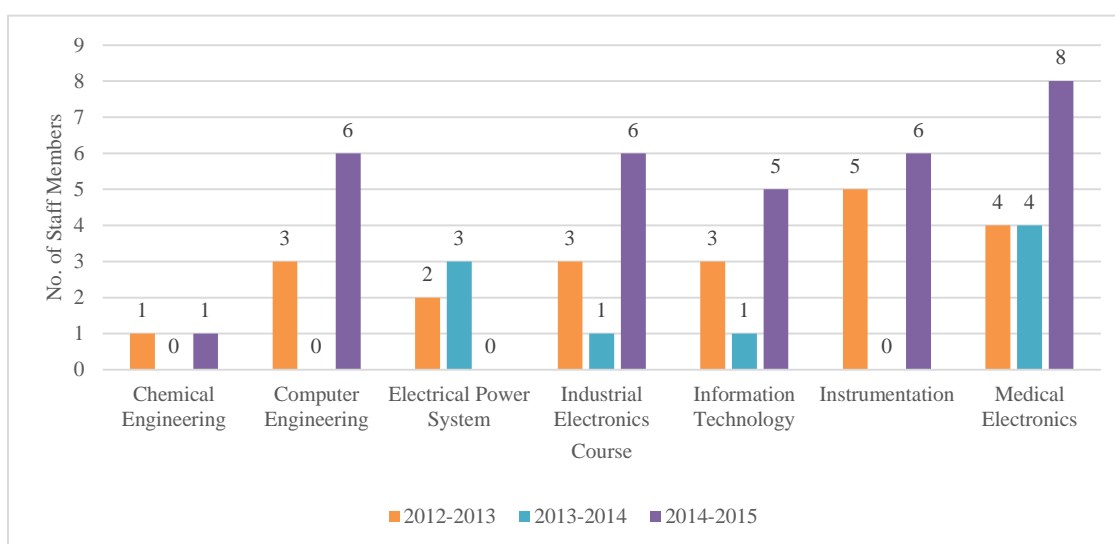
The staff members with special contributions are being appreciated during Faculty meetings, Training programmes and Conferences.

The staff members with exceptional contribution in organizing various activities, Journal publications and other achievements are recommended for Best Teachers Awards of State Government, ISTE and other authorities/organizations.

Corrective Measures

- The teachers whose performance needs improvement are counseled by the Respective HOD's about their expected areas of enhancement.

Facilities	Score (%)
College Campus, Security	93.09
Class Rooms	85.77
Laboratory Equipment's, Conduct of Practical, Project etc.	89.02
Library, Reading Rooms, Home Issue, Book Bank, Periodicals, Journals	95.12
Teaching Faculty, Mentoring	96.34
Opportunity for Co-curricular activities	81.30
Computing Facilities, Internet	80.89
Seminar, Conference Halls	92.28
Training and Placement Assistance	77.64
Industrial Visits & Guest Lectures	89.02
Scope for Value Addition Programmes	81.30
Office; Administrative Staff Support for Admission, Fees payment, Railway/Bus concession, Bonafide and Other certificates	86.99
Wash rooms, Drinking Water facility	76.82
Campus Stores, Duplicating facility	78.86
First Aid Facility	85.02

8.3 Feedback on Facilities (5)

Assessment is based on student feedback collection, analysis and corrective action(s) taken:

Institute has adequate Infrastructure for Lectures, Practical, Tutorials, Library, Wash Rooms, Canteen Etc. Feedback Form is prepared to understand Stake holder's Viewsto find out scope for further improvement.Feedback from 82 students is taken for 15 parameters which are quantified as under:

- **Corrective action taken based on the Feedback and Comments:**

The Feedback indicated that the students are by and large satisfied with the currently available facilities. The maintenance of the existing infrastructure is done on regular basis. Sports and Cultural competitions are held during the Semester Break. Institute is planning to

provide more recreational area and facilities to students without compromising on Academic activities.

Based on the Feedback Analysis and suggestions for improvementfollowing measures are taken.

Suggestions for improvement	Measures Undertaken
Washroom improvement	Work is in progress
Improvement in Canteen services	Instructions are given to Canteen
E-Classroom	Seminar room with Audio-Visual facilities provided
Playground	Made available to the students in the mornings and evenings.

8.4 Career guidance, Training, Placement (20)

(The institution may specify the facility, its management and its effectiveness for career guidance including counseling for higher studies, campus placement support, industry interaction for training/internship/placement etc.)

Organizational Chart

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                          ┌─────────────────┐
                          │      TPO        │
                          │ Mrs. S.S. Kulkarni │
                          │    EPS Dept     │
                          └─────────────────┘
```

Coordinator Mrs.Shanthi Lagadua IE Dept	Coordinator Mrs.Rutuja Tendulkar IF Dept	Coordinator Mrs.Dipali Bhole CO Dept	Coordinator Mrs.Sheetal Mhatre IS Dept	Coordinator Mrs.G.A.Pujare MU Dpet	Coordinator Mrs.Sunayana Joshi CH Dept
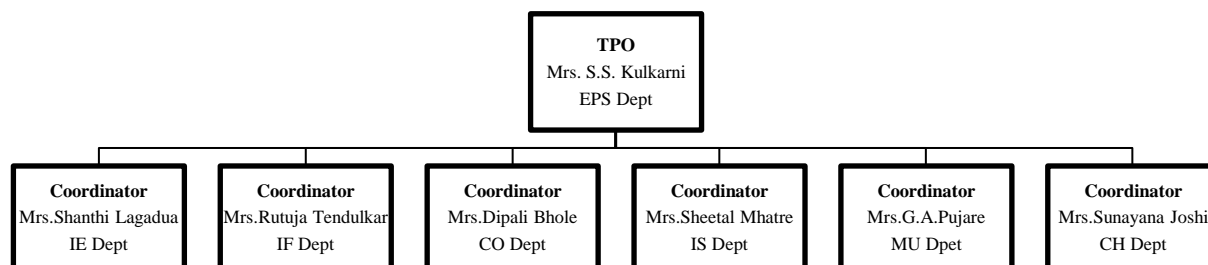
Objectives and Features

- Strong liaison with industry.

- Each department has a Placement Coordinator who reports to TPO in organizing Training & Placement activities.

- Approach industries for internship training and placement needs.

- Training activities for soft skills and interview techniques.

- Create awareness among students regarding available career options and help them in identifying their career objectives.

- Take feedback from industry and provide inputs for curriculum.

1. FACILITY

- Guest Lectures from Industry and academics for career guidance

- Hub & Spoke model of MSBTE

- Industrial visits to give exposure to faculty and students

- Industry related projects

Facilities of last 3 years

Activity	2015-16	2014-15	2013-14
Career Guidance Lectures	12	16	12
Hub & Spoke Lectures (MSBTE)	02 Seminar + 1 Ind. Visits	01 Seminar + 2 Ind. Visits	*
Industry Visits	48	37	27
Industry related projects	11	04	02

* Hub & Spoke activity was initiated by MSBTE during the year 2014-15.

Sr. No	Date	Activity	Resource Person	No. of Beneficiaries
1	11/10/2013	Seminar on Carrier Guidance	Dr. K. D. Desai, Principal, V.P.M's college of Engineering Velneshwar	84

2. MANAGEMENT

- **Placements**

Companies/Recruiters criteria for placement conduct Aptitude Test, Group Discussion, Interview and Medical Test. This criteria vary depending upon the Company and no. of vacancies.

- **Internships**

Internship is a period of work experience offered by an employer to give students exposure to the Industrial environment, often within a specific Organization related to the field of study and interest.

On the job experience gives opportunity to apply theoretical knowledge to practical applications.

From academic year 2015-16, MSBTE has made it mandatory for Fourth and Sixth Semester students to undergo internship of 4 weeks in the summer vacation.

Benefits of Internship

- Transition from Classroom learning to Work experience.

- Explore of Career options based on interests and abilities.

- Develop leadership abilitiesand acquire new skills.

- Improve Self Confidence, Communication and skills to work in team.

- Help to develop sense of responsibility and trust.

Placement and Internship details for last 3 years

Activity	2015-16		2014-15		2013-14
No. of Campus Placements	13		9		8
Industries Interacted for Placement	14		10		8
No. of Industries for Internships	IE	15	IE	--	*
	IS	13	IS	01	
	EP	15	EP	10	
	IF	20	IF	--	
	CH	15	CH	--	
	MU	19	MU	02	
	CO	61	CO	--	

* Internship activities started from the year 2014-15.

No. of Interns in Summer 2016

Branch	Second Year	Third Year	Total
Chemical Engineering	14	19	33
Electrical Power Systems	20	31	51
Instrumentation	40	55	95
Industrial Electronics	39	25	64
Medical Electronics	13	33	46
Computer Engineering	67	66	133
Information Technology	21	31	52
		Total	**471**

3. EFFECTIVENESS

MOUs with Institutes and Industries

- **UKIERI Project**

VPMs Polytechnic, Thane signed the MOU for a collaborative research on Artificial Heart with the Aston University U.K. in October 2012. Mrs. Kirti Agashe, HOD Industrial Electronics, VPM's Polytechnic, Thane is Indian Principal Investigator and Mr. Omkar Joshi, Researcher/Lecturer, Industrial Electronics Department is conducting the research. Dr. Mark Prince, Lecturer, ME+D, Aston University is working as U.K. principal Investigator.As a part of the MOU, Mrs. Kirti Agashe and Mr. Omkar Joshi visited Aston University U.K. to discuss the project progress and to conduct experiments at Aston University during January – February 2013.

This research program has received the UKIERI (UK India Education & Research Initiative) collaborative research funding.

- **MOU with Northern College – Ontario, Canada was signed on 15th June 2009.The purpose is to facilitate students for higher studies and employment opportunities in Canada.**

In addition to the above International MOU, individual departments have signed MOU with the local industries and organizations for mutual exchange and sharing of knowledge, manpower, training etc.

These MOU's have aidedto enhance the Industry interaction of the Institute for Placement and Internship. The faculty is benefitted through industrial exposure for hands-on training as well as latest updates in technology.

MOUs of various Departments

Sr.No.	Department	Name of Company for MOU
1	Electrical Power Systems	Shrihans Electricals Pvt. Ltd, Taloja
		AdityaVidyut Pvt. Ltd., Bhiwandi
2	dustrial Electronics	Digele Systems, Mahim, Mumbai
		Shri Sai Works Power Division Dombivali
		Ecomation Systems ,Thane
3	Information Technology	Appeteria.com, Dombivli
		QUICKTECH, Thane
4	Computer Engineering	Techknow Pvt. Ltd, Thane
		Learning Pixels, Thane
5	Instrumentation	Supertech, Thane
		Suchi Engineers, Thane
6	Medical Electronics	Vighnaharta Sales & services, Bhiwandi
7	Chemical Engineering	Suchi Engineers, Thane
		Thakkar Dyechem Industries, Badlapur, Thane
		Process Units Engineers and Manufacturers, Dombivli, Thane

The Industry Interaction has helped to place desirous Diploma students as well as Internship of the students during the Second and Third year vacations.

8.5 Entrepreneurship cell/ Technology Business Incubator (5)

(The institution may describe the facility, its management and its effectiveness in encouraging entrepreneurship and incubation)(Success stories for each of the assessment years to be mentioned)

Polytechnic started Entrepreneurship Development Cell in the academic year 2011-2012.The Cell intends to encourage, motivate and provide training for the students who wish to become Entrepreneurs.

Entrepreneurship Development Cell strives to inspire and generate a culture of Innovation to help budding entrepreneurs to realize their potential. The objectives of the Cell are:

Short Term:
1. To train and equip the students with the knowledge and resource that are needed to build startups.

2. To conduct:

a. Entrepreneurship Awareness Camp (EAC).

b. Entrepreneurship Development Programs (EDP).

c. Faculty Development Programs (FDP).

d. Skill Development Programs (SDP).

3. Conduct a variety of competitions round the year for incubating nascent ideas and providing mentorship to budding entrepreneurs.

4. Building Entrepreneurs – Orient students towards entrepreneurship since this is the phase of life where dreaming about their goals in life begins.

5. Every year **Technology Day**is organized to bring synergy between **Industry** and **Institute**. Two original projects from each department will present their ideas. The Cell tries to build relationship with few industries to take these ideas forward.

Long Term:

1. To assist students in starting industries of their own for:

    a. Product identification.

    b. Market survey, tools for market research.

    c. Preparation of project reports.

    d. Preparing technical feasibility reports.

2. Consultancy and Research.

3. Training programs for industrial professionals.

Activity Chart for Entrepreneurship Development Cell

```
┌─────────────────┐
│ Entrepreneurship│
│ Development Cell │
└─────────────────┘
         │
┌─────────────────┐
│  Sensitization  │
└─────────────────┘
         │
┌─────────────────┐
│    Inviting     │
│  Applications   │
└─────────────────┘
         │
┌─────────────────┐
│Student Selection│
└─────────────────┘
         │
┌─────────────────┐
│  Conduction of  │
│    programme    │
└─────────────────┘
   │     │     │
┌──────┐ ┌────────┐ ┌────────┐
│Seminar│ │Workshop│ │ Project │
└──────┘ └────────┘ └────────┘
            │
      ╭──────────────╮
      │Entrepreneurial│
      │    Skill      │
      │ Development    │
      ╰──────────────╯
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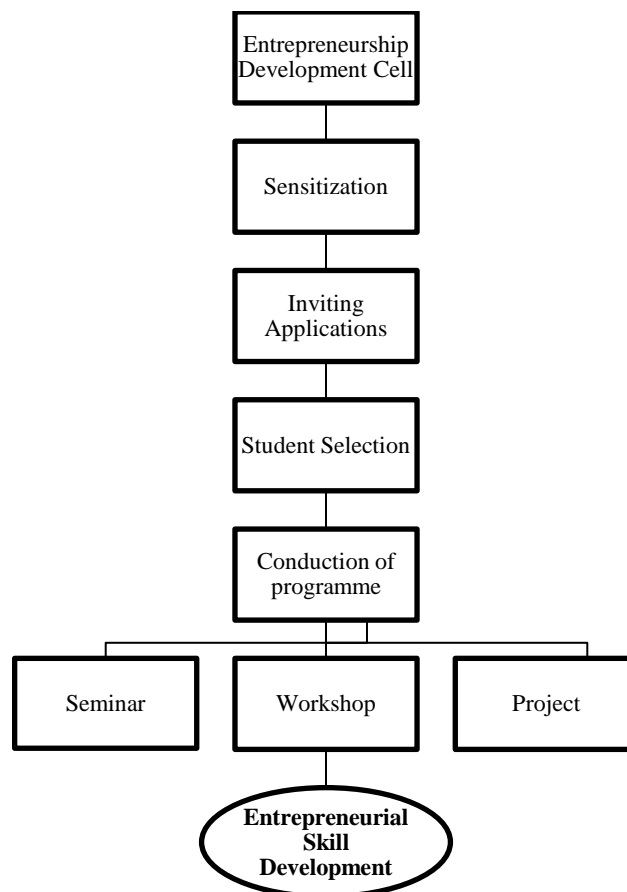
CRITERION 9	Governance, Institutional Support and Financial Resources	75

9.1. Organization, Governance and transparency

9.1.1. Vision and Mission of the Institute

Vision : Ensuring skill development through Quality Technical Education.

Mission : Imparting creative learning by innovative methodologies to expose the

talents by the way of MSBTE (Maharashtra State Board of Technical

Education) curriculum.

Mission objectives are,

M– 1 : Develop technical skills and professional ethics with

entrepreneurial spirit through conducive environment.

M– 2 : Cultivate lifelong learning skills to face challenges with innovation.

9.1.2. Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies.

Organisational Structure
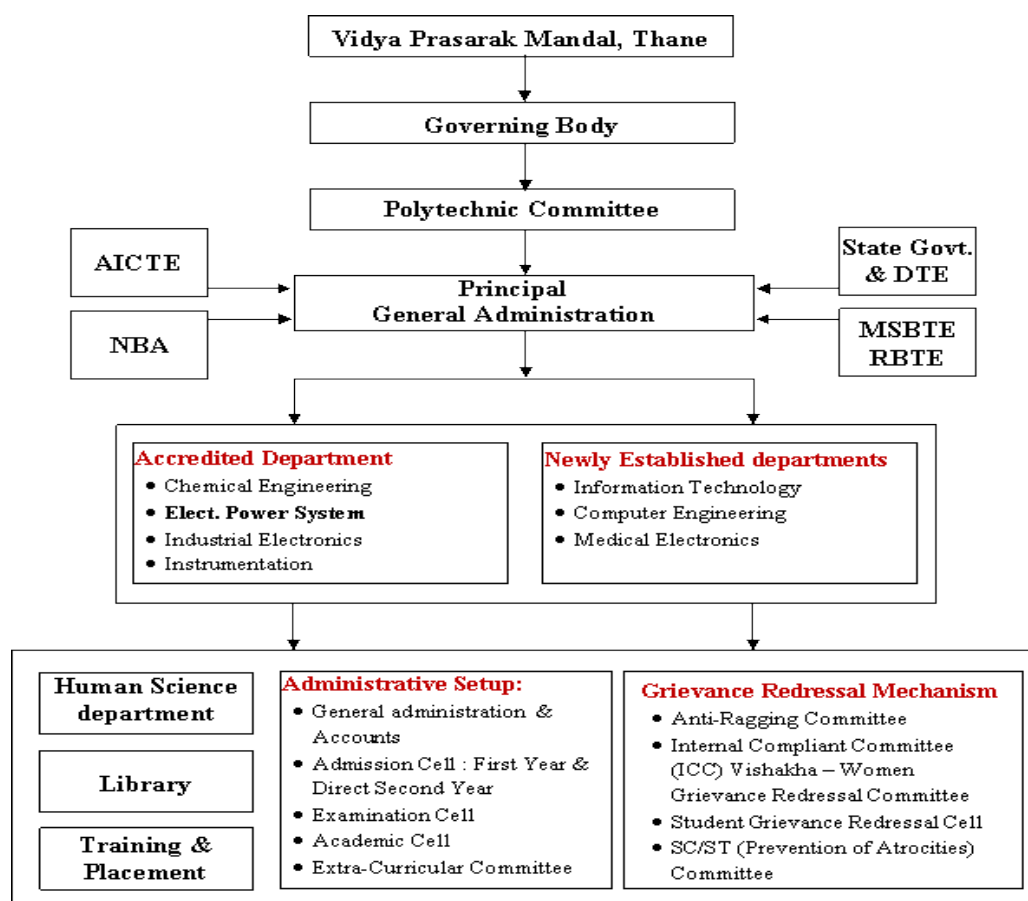
A. Governing Body and Functions of various Bodies

Present Governing Body Members

1. Dr. V.V. Bedekar   Chairman

2. Sri. M.Y. Gokhale   Member - Chairman TBSB Bank, Thane

3. Sri. U.B. Joshi   Member – Vice Chairman TBSB Bank, Thane

4. Sri. J.N. Kayal   Member – Former Scientist BARC, Mumbai

5. Sri. A.C. Joshi   Member – MD Ornate Chemicals Ltd. Thane

6. Dr. Ramesh U.   AICTE Nominee – Regional Officer, RO, Mumbai

7. Dr. D.D. Kale   Member Academician, Former HOD, ICT, Mumbai

8. Prof. P.A. Naik   Jt. Director- DTE, RO, Bandra, Mumbai

9. Prof. V.D. Vaidya   Dy. Secretary, MSBTE, R.O., Mumbai

10. Sri. C.S. Limaye   Member-Industrialist–MD, Supertech Instruments, Thane

11. Dr. Siddhan S.   Member-Industrialist–MD, Laxmi Chemicals Ltd., Chennai

12. Prof. D.K. Nayak   Principal & Secretary

13. Mr. V.A. Walavalkar   Member - Teaching Staff

14. Mrs. S.S. Kulkarni   Member - Teaching Staff

The Governing Body is constituted as per the guidelines of AICTE, New Delhi. The first meeting of the Governing Body was held on 8th August 1995.

Functions of Governing Body

- The Governing Body is the Supreme body responsible for the management of the Institution.

- To consider the recommendation of sub-committee in respect of Infrastructure, Equipment's, Library resources, Staff and Finance for the Academic year. The sub-committee includes Heads and In-charges of Departments, Office and Library on a continuous basis.

- To approve the proposed Recurring and Nonrecurring Budget estimates of various departments and other sections.

- To scrutinize and accept Audited statement of account of each year.

- To approve the Teaching and Non-teaching staff posts as per the Institution load requirements.

- To consider and make provisions for meeting the General and Specific conditions laid down by AICTE, State Government, DTE, MSBTE, NBA and monitor the progress in fulfilling the conditions.

- To consider the report of the Principal on the status of Admissions.

- To consider the report and the proposals of the Principal on Academic performance of the staff and students. Recommend necessary remedial measures if needed.

- To approve proposals of the Principal to enhance academic atmosphere in the Institution.

- To consider proposals for expansion of educational activities to be made to AICTE, DTE, MSBTE such as change of Course, increase/decrease in intake capacity.

- Any other important policies and decisions in the future interest of the Institution.

Schedule of Sub-committee meeting held in the last 3 years

Sr. No.	Date of Meeting	Main Points discussed to place before GB/PC	Members Present
1	23rd Jan 2013	Formation of various committees. Anti-Ragging Squad, Anti-Ragging Committee, Women Grievance Redressal Committee, Grievance Redressal Cell.	10
2	16th Feb 2013	Academic Monitoring, Winter 2012 Results, Unit test II/PST, Disha Magazine, Polytechnic Magazine.	10
3	11th March 2013	MSBTE Practical/Theory Exam, Stock taking, Pending fees payment by SY/TY Students, Staff Recruitment.	10
4	14th Aug 2013	MSBTE Hub-Spoke Model, SSS final Fees approval	6
5	14th Dec 2013	AICTE mandatory disclosures, International Conference 'Bhaskara-900'	7
6	14th Feb 2014	Library Automation using Open source KOHA software, Value Addition Programmes	7
7	7th Aug 2014	FY Schedule, Plan for Unit test-I, Lectures and Practical's planning, Preparation for NBA	7
8	6th Sept. 2014	Admission Statistics 2014-2015, Status of Academic progress of all the departments, Conference preparations	3
9	10th July 2015	First & Second year Admission Status, Delegation of Responsibilities to staff in the Department,	10

Sr. No.	Date of Meeting	Main Points discussed to place before GB/PC	Members Present
		National Conference, Remedial Session data and progress, Alumni Meet.	
10	8th Sept. 2015	MSBTE Enrollment, Exam Form filling, Teaching Staff Load review, Journal/Conference publications.	6
11	21st Oct. 2015	Finalizing Disallowed candidates W-15 Exam, Various Proposals, Scholarship.	7
12	21st Jan. 2016	W-2015 Result Analysis, NBA Proposal submission, AICTE-EOA, Academic Monitoring, Budget 2016-2017.	9
13	10th Aug. 2016	Recurring, Non-Recurring and Maintenance Budgets.	7

The Meetings of Governing Body are held twice in a year(March and September)

Schedule of Governing Body Meetings held during last 3 Years

Sr. No.	Year	Particulars	Date	Venue	Total Members Present
1	2016-17	33rd Meeting	8th September 2016	Board Room	11
2	2015-16	32nd Meeting	4th March 2016	K.V. Vaze Hall	13
		31st Meeting	10th September 2015	Board Room	10
3	2014-15	30th Meeting	13th March 2015	K.V. Vaze Hall	06
		29th Meeting	23rd September 2014	Board Room	11
4	2013-14	28th Meeting	15th March 2014	K.V. Vaze Hall	12
		27th Meeting	14th September 2013	Board Room	11

B.   Polytechnic Committee

The Polytechnic committee is the local committee formed for implementation of the policies of the Management and Governing Body. This committee was formed in the year 1987 to monitor the day-to-day activities as well as for the staff participation in managing the academic and administrative functions.

Present Polytechnic Committee Members

1. Dr. V.V. Bedekar   Chairman

2. Sri. M.Y. Gokhale   Member - Chairman TBSB Bank, Thane

3. Sri. U.B. Joshi   Member – Vice Chairman TBSB Bank, Thane

4. Sri. J.N. Kayal   Member – Former Scientist BARC, Mumbai

5. Prof. D.K. Nayak   Principal V.P.M's Polytechnic

6. Mrs. S.S. Kulkarni   Teaching Staff representative

7. Mr. C.S. Shingade   Support staff representative

List of Polytechnic Committee Meetings held during last 3 Years

Sr. No.	Year	Particulars	Date	Venue	Total Members Present
1	2016-17	74th Meeting	8th September 2016	Board Room	08
2	2015-16	73rd Meeting	14th December 2015	Board Room	06
		72nd Meeting	17th July 2015	Board Room	06
3	2014-15	71st Meeting	20th December 2014	Board Room	06
		70th Meeting	30th July 2014	Board Room	06
4	2013-14	69th Meeting	14th December 2013	Board Room	05
		68th Meeting	20th July 2013	Board Room	04

Functions of Polytechnic Committee

- To maintain transparency for implementation of management policies and the decisions taken in the Governing Body.

- Various proposals as well as developmental activities are discussed before placing for approval in the Governing Body.

- The views of staff members to be considered for implementation.

- Suggestions of the staff members are considered for healthy working atmosphere.

C. Administrative Setup

General Administration and Accounts

- Maintaining the details of staff members and Service Records.

- Attendance management

- Students Data Management and related services.

- Students Fees collection and other receipts.

- Accounts management, Payroll, Statutory deductions and compliance.

Admission Cell : First Year and Direct Second Year

Stage 1

- Counselling at various Schools for SSC appearing students.

- Arranging School students visit to Polytechnic facilities.

- Guidance about the Centralized Admission Process of State Government.

- List of Essential documents to be kept ready for Admission Application registration.

Stage 2

- Facilitation Centre for Issue of Login kits with Admission Brochure.

- Assistance for submitting Online Admission forms to candidates.

- Assistance to update details during Grievance Redressal period.

- Assist Candidates to upload Institute and Course Options during CAP Rounds.

- Guidance to Students/Parents about Course details and Future prospects.

- Counseling the admission allotted students for document submission and payment of fees.

- Orient the students for Academic and Co-curricular activities.

Stage 3

- Upload admitted student's data on DTE/ MSBTE/Pravesh Niyantran Samiti/AICTE Portals.

- Keep Documentation ready for Merit List verification.

- Complete the Document Verification and Merit List Approval as per DTE RO notified Schedule.

Examination Cell

The functions include

- MSBTE Enrolment of newly admitted students. Smooth conduct of all Internal and External Exams.

- Certificate Of Backlog (COB) of Direct Second Year (DSY) / Transfer Candidates.

- Examination related guidelines are forwarded to concerned staff and students from time to time.

- Maintain details of Learning Disability (LD) students for awarding applicable concessions as per MSBTE norms.

- Record Keeping and Safety of Exam stationary and other related Inventory.

- Exam form filling of Regular and Ex-students.

- MSBTE Exam Result Analysis. Result Records.

- List of Staff with 100% results in Summer and Winter Theory Examinations.

- Intimation to staff about Result Statistics and conduct of remedial sessions in case of Poor results.

Academic Cell

- Preparation of Prospectus, Student Hand Book.

- Preparation of Annual Academic Time table.

- Schedule co-curricular activities, Guest lectures, Industrial visits, Seminars.

- Internal Academic Monitoring, Unit Test, preparation for External Academic Monitoring, Students counseling, Industrial projects etc.

Extra-Curricular Committee

- This cell organizes cultural and sports events during the semester break.

- The activities include Singing, dancing, Mehendi competition, fun fair, Elocution, Rangoli, T-shirt painting, Saree Queen, Tie King, Traditional dress etc.

- The sports event include cricket, volley ball, Kabaddi, Chess, Carrom, Table-tennis etc.

D. Defined rules, procedures, recruitment and promotional policies:

Rules, Procedures:

Vidya Prasarak Mandal, Thane had implemented service rules since the establishment of the Polytechnic in the year 1983. The rules of conduct, discipline and service conditions for the employees of Vidya Prasarak Mandal's Polytechnic, Thane have been reaffirmed by the management vide its resolution dated 4th June 2006. The copy of the rules document is made available in the office as well as with the heads of various departments. The staff members are permitted to refer to the service conditions.

Recruitment and Promotional policies:

The staff is recruited by following appropriate procedure. Annually in the month of March advertisement for the various vacancies is published in local newspaper and institute website.
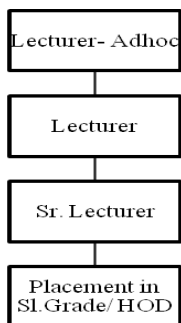
The Shortlisted candidates are invited for written test and interview. The successful candidates are informed to join by completing the official formalities. The Adhoc staff members are continued in service based on their satisfactory performance in the preceding year.

Within the framework of working of the Polytechnic and Staff promotion scheme, the regular faculty members with adequate qualification, experience, publications, Good Performance Appraisals are promoted to the next higher levels. This is done by following AICTE and the State Government norms applicable to the regular staff members from time to time.

For Administrative/Library/Support staff members the promotion is given as per the State Government policies. In addition, the staff who have upgraded their skills through Certificate or Advance Diploma programmes are given appreciation in the form of Incentive / Additional increment.

9.1.3. Decentralization in Working and Grievance redressal Mechanism (5)

A. Decentralization in Working (Administration & Decision making)

The Institute has a decentralized method of working with each staff member being held accountable for the assigned responsibilities.

Principal: Academic and Administration of the Institution.

- Provide effective leadership to the Polytechnic

- Liaison with Management, AICTE, NBA, DTE, MSBTE, Industries, Parents, Students, Alumni and other stakeholders

- Implement and monitor policies of management, decisions taken in Governing Body and Polytechnic Committee. Guide various committees and cells for effective functioning.

- Approve Academic calendar, hold faculty meetings, monitor admission, academic and exam related activities. Monitor faculty performance, resolve issues (if any) to create conducive atmosphere.

- Ensure safety and security measures of Institutional infrastructure and the resources.

- Evolve future plan and prepare for progress, development and sustainability.

Head of the Departments/In-charge: Academic and Administration of the department

- The Head of the Department is responsible for the smooth functioning of the department as per the academic calendar.

- Conduct academic co-curricular, extracurricular activities of the students of the departments.

- Monitoring the Industry Interaction for Guest faculty, Internship and Projects.

- Assign various responsibilities such as Class Teachers, Mentors, Co-curricular co-ordinators, Academic co-ordinators, Lab In-charges etc. to Faculties and Laboratory Staff.

- The staff of the department report to the Head from time to time with the results of assignments.

B. Grievance Redressal Mechanism

Following four committees are formed for the Redressal of Grievances

1. Anti-Ragging Committee

According to the provision of All India Council Technical Education (AICTE) norms, the Principal framed the Anti-Ragging Squad during academic year 2015-2016.

List of Members of Anti-Ragging Committee

Sr. No.	Name of Faculty	Designation
1	Prof. D.K. Nayak	Chairman
2	Mrs. K.S. Agashe	Dy. Chairperson
3	Mr. S.S. Mujumdar	Member
4	Mrs. V.A. Joshi	Member
5	Dr. (Mrs.) UshaRaghavan	Member
6	Mr. T.V. Mohite-Patil	Member
7	Mrs. Suhasini.K. Shukla	Member
8	Mrs. Anice Alias	Member

Activities undertaken (Every year)

- Formation of committee by the Principal.

- Planning of meetings at the beginning of the Semester

- Preparation of Action plan for regular vigilance.

- Display of Ragging prohibition notices on all department notice boards

- Selection of the Staff representatives from each department to take rounds for prohibition of ragging.

- Regular meetings to resolve the problems, if any.

- Guiding to Institute Counselor for handling psychological issues related with ragging.

2. Internal Compliant Committee (ICC) Vishakha – Women Grievance Redressal Committee

A new section known as the 'Women Grievance Redressal Committee' (WGRC) has started functioning in the college from the academic session 2011. WGRC is formed in order to keep the healthy working atmosphere among the faculty of Polytechnic. This Cell helps women faculty and students to record their complaints and solve their problems related to resources and personal grievances. Woman Harassment complaints will be handled as per government guidelines.

List of Members of Women Grievance Redressal Committee

Sr. No.	Name of Faculty	Designation
1	Mrs. N.V. Vader	Chairperson
2	Mrs. Alpana A. Bapat	Member (NGO)
3	Mrs. K.S. Agashe	Member
4	Dr. (Mrs.) Usha Raghavan	Member
5	Mrs. Suhasini.K. Shukla	Member
6	Mrs. G.A. Pujare	Member
7	Mrs. S.D. Khandagale	Member
8	Mr. T.V. Mohitepatil	Male Member

Functional view of WGRC:

Women's Grievance Redressal committee functions with a view to look after the general well-being of the women folk in the campus. It organizes different women empowerment programmes. All women staff and students are members of the cell. Any type of sexual harassment physical, verbal or mental shall come under the purview of the cell, and it is empowered to initiate proactive actions against such offences.

Major Activities:

- Awareness of WGRC among the women students and staff in the polytechnic

- Program on "Self Defense".

- Program on Health and Hygiene

- Observe the International women's Day on 8th March

3. Student Grievance Redressal Cell

List of Members of Student Grievance Redressal Cell

Sr. No.	Name of Faculty	Designation
1	Prof. D.K. Nayak	Chairman
2	Mr. V.A. Walavalkar	Dy. Chairperson
3	Mrs. S.S. Kulkarni	Member
4	Mrs. Santhi M.L.	Member
5	Mrs. R.G. Tendulkar	Member

The Student Grievance Redressal Cell functions are:

- Invite student's suggestions for improving theory and practical teaching performances.

- Take cognizance of the request made by students about the various facilities and implement solutions.

- To resolve any conflicts among the students and to maintain a conducive environment.

- Coordinates Counseling sessions to newly admitted students to deal with Stress and other problems faced.

- Monitor Student activities to prevent untoward incidents.

- Disobedient students are being identified and are counseled to be punctual.

- To deal with any incidences involving students from time to time and report to the Principal for further action.

4. SC/ST (Prevention of Atrocities) Committee

List of Members of SC/ST (Prevention of Atrocities) Committee

Sr. No.	Name of Faculty	Designation
1	Prof. D.K. Nayak	Chairman
2	Dr. (Mrs.) G.S. Ingawale	Member
3	Mrs. R.U. Patil	Member
4	Mrs. S.D. Khandagale	Member
5	Mrs. G.A. Pujare	Member

The cell is formed to ensure fair treatment to Reserve Category staff and students. Institute's overall ambience is extremely fair for all stakeholders including students from economically weaker sections. Administration helps the students to fill scholarship forms and complete other documentation to entitle their learning at concessional fees. Students are properly informed about different scholarship schemes, deadlines etc. to avail the benefit.

- The Cell basically aims to uplift the morale of deprived section of students and staff.

- Ensure equal opportunities to all the students and staff irrespective of their background.

- Encourage and motivate through counseling and personality development programmes.

- The Cell is formed to deal with incidences (if any) and to report about individuals responsible for atrocities and suppression.

9.1.4. Delegation of Financial Powers (5)

The Institute prepares and approves Budget of the next financial year during Governing Body meeting. Head of the Institute implements the decisions taken in the Governing Body with approval from Management

The department budgets for Recurring/Non-Recurring/Maintenance activities are sanctioned by the Governing Body. Each department recommends the laboratory equipment and accessories for the year with justification. The department plans the budget as per curriculum and laboratory demands. The list of equipment's to be procured/experiments to set up as per

curriculum are finalized by the departments with tentative cost within the allocated budget. The purchasing is done through the co-operative society to ensure proper price, quality, after sales service.

9.1.5. Transparency and availability of correct/ unambiguous information in public domain (5)

Academic and Administrative Transparency:

The institute website www.vpmthane.org includes exhaustive information about Polytechnic as well as other sister institutions managed by the Trust. Various notices are regularly posted including the Annual Academic Calendar.

The Academic plan is prepared by all the departments before proceeding on Summer and Winter vacations for Odd and Even Semesters. Administrative procedures are explained to new recruits in the Induction training programme at the time of joining. Every staff member as well as student is informed about academic activities and their responsibilities on regular basis through meetings.

9,2. Budget Allocation, Utilization and Public Accounting at Institute Level

Institute level Income for last three years and current financial year

Total Income (Rs. in Lacs) CFY 2016-17*					Actual Expenses (Rs. in Lacs) CFY 2016-17*				Total No. of Students CFY 2016-17	
Fee	Govt	Grants	Other	Total	Recurring	Non Recurring	Any Other	Total	Exps Per Student (in Lacs)	No Of Student
394.76	137.20	0.00	27.85	559.81	281.94	1.62	37.38	320.94	0.33	974
Total Income (Rs. in Lacs) CFY 2015-16					Actual Expenses (Rs. in Lacs) CFY 2015-16				Total No. of Students CFY 2015-16	
448.01	172.68	1.00	62.41	684.10	630.91	14.41	100.26	745.58	0.68	1104
Total Income (Rs. in Lacs) CFY 2014-15					Actual Expenses (Rs. in Lacs) CFY 2014-15				Total No. of Students CFY 2014-15	
401.73	210.38	1.30	65.11	678.52	639.53	14.98	78.11	732.61	0.69	1067

Total Income (Rs. in Lacs) CFY 2016-17*					Actual Expenses (Rs. in Lacs) CFY 2016-17*				Total No. of Students CFY 2016-17	
Total Income (Rs. in Lacs) CFY 2013-14					Actual Expenses (Rs. in Lacs) CFY 2013-14				Total No. of Students CFY 2013-14	
471.60	187.00	0.00	45.86	704.46	572.57	20.75	71.38	664.71	0.52	1286

*As on 30th September 2016

Table of Recurring and Non-Recurring expenses

ITEMS	CFY 2016-2017 (30-09-2016) Budget	Actual	CFYm1 2015-2016 Budget	Actual	CFYm2 2014-2015 Budget	Actual	CFYm3 2013-2014 Budget	Actual
Infrastructure Built-up	201.52 (incurred before 2013)							
Library	1.00	0.15	3.00	1.66	8.00	3.26	8.00	6.04
Laboratory Equipment	12.75	1.56	13.00	12.86	24.50	11.90	24.50	14.87
Laboratory Consumables	4.05	1.28	4.90	2.52	5.25	3.83	5.25	3.78
Teaching & Non-Teaching Salary	588.50	210.48	568.20	558.34	544.00	507.34	440.00	482.79
Maintenance & Spares	61.90	46.98	127.44	81.46	67.30	116.53	117.30	77.25
R&D	3.00	-	2.00	0.72	1.00	0.85	1.00	1.33
Training & Travel	2.00	0.32	2.00	3.27	3.00	1.48	3.00	1.41
Miscellaneous Exps	-	0.08	2.00	0.11	2.00	0.15	2.00	0.22
Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Tax	1.50	1.64	1.50	1.57	2.50	1.35	2.50	1.35
Newspaper & Magazines	0.70	0.12	1.00	0.40	2.00	0.38	2.00	0.83
Affiliation Fee	1.05	1.05	1.00	1.05	1.00	1.05	1.00	0.70
BTE Exam Stationery	0.50	0.56	0.25	0.20	1.00	0.32	0.50	0.26
Printing Stationery	15.00	6.24	12.50	9.12	9.50	8.70	8.00	7.77
Seminar Student Registration	0.30	0.25	1.00	0.36	0.35	0.29	0.25	0.22
Staff CUTP/STTP	0.50	0.22	1.00	0.50	0.50	0.49	1.00	0.67
Uniforms	0.20	0.00	0.10	0.14	0.25	0.09	0.50	0.11
Audit Fees	0.50	0.60	0.50	0.51	0.50	0.43	0.50	0.39
Student Insurance	0.50	0.55	0.50	0.55	0.00	0.48	-	0.53
Postage	0.10	0.01	0.10	0.00	0.10	0.00	0.25	-
Advertisement	2.00	1.14	1.50	1.69	0.70	1.41	1.00	2.21
Bank Charges	0.15	0.07	0.15	0.00	0.15	0.00	0.15	0.00
Repair & Maintenance	1.00	0.01	1.00	0.15	2.00	0.27	2.00	0.11
ASG Gym Mag	2.50	0.03	2.00	1.51	2.00	2.59	2.00	2.73
I Lib Card	0.50	0.04	0.50	0.63	1.00	0.36	1.00	0.56
Water Charges	4.00	0.90	4.00	2.00	5.00	2.99	2.00	3.29
Telephone Charges	0.50	0.18	0.50	0.48	0.75	0.50	0.75	0.60
Electricity Charges	20.00	8.65	20.00	16.87	20.00	17.67	18.00	15.60
Contingencies	3.00	1.40	1.00	3.34	2.00	3.14	-	3.21
Leased Line	2.55	3.30	2.55	5.81	-	-	-	-
Professional Charges	0.40	0.00	0.40	0.40	-	0.88	-	0.35
AICTE Fee	1.00	0.00	1.00	1.00	-	1.00	-	1.00
Lab Manual	4.50	2.47	4.50	2.67	-	4.22	-	3.41

ITEMS	CFY 2016-2017 (30-09-2016)		CFYm1 2015-2016		CFYm2 2014-2015		CFYm3 2013-2014	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
MSBTE Enrolment	0.90	0.82	0.90	1.08	-	1.09	0.50	0.90
MSBTE Exam Fee	4.03	23.60	8.00	30.41	-	32.50	-	26.72
NBA Processing Fee	10.00	5.75	20.00	-	-	-	-	0.00
ISTE Membership	0.25	0.01	0.00	0.00	-	-	-	0.00
Alumni Association	0.20	0.00	0.00	0.00	-	-	-	0.00
Repayment to IT Centre	67.50	10.00	0.00	0.00	-	-	-	0.00
Receivable for SWD	100.00	0.00	0.00	0.00	-	-	-	0.00
Seminar Exps.	-	-	-	2.78	2.50	5.10	2.50	3.50
TOTAL	919.03	330.45	809.99	746.18	708.85	732.61	647.45	664.71

9.2.1. Adequacy of budget allocation (4)

Details of budget allocated for last three years is shown in following table.

Financial Year	Budget Sanctioned In Lacs		Expenditure In Lacs			Remarks
	Non Recurring	Recurring & Maintenance	Non Recurring	Recurring	Maintenance	
2015-16	2.00	0.70	0.52	0.10	0.07	Sufficient
2014-15	2.00	0.75	0.89	0.31	0.14	Sufficient
2013-14	2.00	0.75	1.98	0.46	0.22	Adequate

- Above said expenditure is done to full fill the requirements of implementation of G-scheme curriculum and also to undertake modernization and removal of obsolesces.

- For certain experiments required apparatus was shared from other department.

- Few costly apparatus were fabricated under student's project as per requirement of practical setups.

Means of Budget Management for last three years

Financial Year	Details	Amount (in Rs. lacs)	Total (in Rs. lacs)
2013-14	Conduction of Practical of Electrical Engineering Program of for Govt. Polytechnic, Mumbai	0.15	3.13
	Advance Diploma in Energy management and audit ER programme	2.98	
2014-15	Replica Model of Distribution Transformer with all accessories	0.30	3.61

Financial Year	Details	Amount (in Rs. lacs)	Total (in Rs. lacs)
	2kVA Three phase , 220/110V, Y/Y Transformer as student's project for laboratory use	0.08	
	Sponsorship by MEDA for State level tech. paper presentation competition	0.25	
	Advance Diploma in Energy management and audit ER programme	2.98	
2015-16	Best Lab award for M/c Lab (L1)	0.50	4.29
	Sponsorship by MEDA for State level tech. paper presentation competition	0.25	
	Student's Project – Single Phasing Preventer for laboratory use	0.10	
	Advance Diploma in Energy management and audit ER programme	3.44	
	Grand Total	**11.03**	**11.03**

9.2.2. Utilization of allocated funds (4)

The Tentative Annual Budget is prepared by the Office in the month of February for the forthcoming Financial and Academic year. The Subcommittee inputs are considered for the expenses to be included under various heads. Non-recurring Budgets are allotted to purchase equipment's for new experiments or to phase out old instruments which are beyond repair. The Department Heads submit the list of equipment's and services to the Principal. The tentative budget is placed before the Governing Body Meeting held in the month of March every year for approval.

9.2.3. Availability of the audited statements on the Institute's website (2)

The Annual Balance Sheet is prepared every year audited by the Chartered Accountant. The Balance Sheet is placed in the Institute website. The hard copy of the Balance Sheets of last 3 years will be presented to the Peer Committee at the time of visit.

9.3. Program Specific Budget Allocation, Utilization (15)

Total Budget at Institute Level: For Financial Year 2016-17 (30-9-2016)

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Chemical Engineering	1.00	0.75	-	0.68	Total No. of Students = 974
Electrical Power System	**2.00**	**0.75**	**0.19**	**0.13**	
Industrial Electronics	2.00	0.75	0.84	0.09	
Instrumentation	2.00	0.75	-	0.17	
Information Technology	2.00	0.75	0.32	0.07	
Computer Engineering	2.00	0.75	0.20	0.002	Expenses Per Student Rs. 0.003
Medical Electronics	1.00	0.50	-	0.03	
Physics	0.25	0.10	-	0.002	
Chemistry	0.25	0.30	-	0.05	
Workshop & APM	0.25	0.55	-	0.05	
Total	**12.75**	**5.95**	**1.56**	**1.28**	

Total Budget at Institute Level: For Financial Year 2015-16

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Chemical Engineering	1.00	0.70	0.31	0.29	Total No. of Students
Electrical Power	2.00	0.70	0.60	0.43	

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
System					= 1104
Industrial Electronics	2.00	0.75	2.05	0.24	
Instrumentation	2.00	0.75	0.91	0.44	
Information Technology	2.00	0.70	2.15	0.28	
Computer Engineering	2.00	0.75	3.12	0.19	
Medical Electronics	2.00	0.75	0.96	0.23	
Physics		0.15	0.20	0.005	**Expenses Per Student Rs. 0.01**
Chemistry		0.25		0.02	
Workshop & APM		0.50	0.14	0.40	
Furniture office equipment			2.42		
Total	**13.00**	**6.00**	**12.86**	**2.53**	

Total Budget at Institute Level: For Financial Year 2014-15

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Chemical Engineering	1.00	0.75	1.86	0.45	**Total No.**
Electrical Power System	2.00	0.75	0.89	0.62	**of Students**
Industrial Electronics	2.00	0.75	0.74	0.45	**= 1067**

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Instrumentation	2.00	0.75	3.35	0.81	
Information Technology	2.00	0.75	3.58	0.12	
Computer Engineering	2.00	0.75	0.25	0.14	**Expenses Per Student Rs. 0.015**
Medical Electronics	2.00	0.75	1.02	0.64	
Physics	0.50	0.35		0.008	
Chemistry	0.50	0.35		0.16	
Workshop & APM	0.50	0.35		0.42	
Furniture office equipment	10.00		0.19		
Total	**24.50**	**6.30**	**11.90**	**3.83**	

Total Budget at Institute Level: For Financial Year 2013-14

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Chemical Engineering	1.00	0.75	0.59	0.73	
Electrical Power System	2.00	0.75	1.97	0.68	**Total No. of Students = 1286**
Industrial Electronics	2.00	0.75	3.49	0.41	
Instrumentation	2.00	0.75	0.75	0.37	
Information Technology	2.00	0.75	1.85	0.13	
Computer Engineering	2.00	0.75	3.50	0.37	**Expenses**

Department	Total Budget (Rs. in Lacs)		Actual Expenses (Rs. In Lacs)		
	Non Recurring	Recurring	Non Recurring	Recurring	
Medical Electronics	2.00	0.75	1.70	0.46	**Per Student Rs. 0.015**
Physics	0.50	0.35		0.04	
Chemistry	0.50	0.35	0.08	0.16	
Workshop & APM	0.50	0.35		0.43	
Furniture office equipment	10.00		0.94		
Total	**24.50**	**6.30**	**14.87**	**3.78**	

Total Budget at the Institute Level for the below listed Items.

Items	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual
	30-9-16	30-9-16	2015-16	2015-16	2014-15	2014-15	2013-14	2013-14
Laboratory Equipment	12.75	1.56	13.00	12.86	24.50	11.89	24.50	14.87
Software	6.00	1.60	6.00	5.58	7.30	6.84	7.30	7.98
Laboratory Consumable	4.75	1.28	4.90	2.52	5.25	3.83	5.25	3.78
Maintenance & Spares	55.90	45.38	121.44	81.10	60.00	109.69	110.00	69.28
R & D	3.00	0.50	2.00	0.72	1.00	0.85	1.00	1.33
Training & Travel	2.00	0.31	2.00	3.27	3.00	1.48	3.00	1.41

Items	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual
	30-9-16	30-9-16	2015-16	2015-16	2014-15	2014-15	2013-14	2013-14
Miscellaneous Expenses		0.08	2.00	0.11	2.00	0.15	2.00	0.22
Total	84.40	50.72	151.34	106.16	103.05	134.73	153.05	98.87

9.3.1. Adequacy of Budget allocation (7)

The expenses under various heads are allotted in the budget by referring to the earlier year Balance Sheet and proposed activity expenses. The procurement is done by considering specific requirement and its justified use as approved by the Governing Body. The budget is finally implemented by considering the actual fees income of the admitted students and the reimbursement of fees of Reserve and Economically Backward students from the concerned Authorities. The fees collected is progressively invested in the Bank as per expected monthly expenses such as Salaries, Operational Overheads, Recurring and Non-recurring and maintenance expenses as well as miscellaneous expenses. Certain expenses are rescheduled if the finds are delayed from the Authorities.

9.3.2. Utilization of allocated funds (8)

Every department utilizes their allocated budget as per the plan and need. All the essential requirements of the department are fulfilled for proper Academic activities

9.4. Library and Internet (20)

Apart from Central Library each department is having internal departmental library which is exclusively used by the faculty members. All computer systems are connected through LAN with the Internet facility.

9.4.1. Quality of learning resources (hard/soft) (10)

Library and Information Centre has a collection of over 24000 books. The library is fully computerized with **Open Access KOHA software**.

The Library facilities include

- Reading room with issue of text/reference books.

- Home issue of 1 book per students of First & Second year and 2 Books for Third year students.

- Book Bank facility to 400 + students every Semester. Free Book Bank sets are issued to all SC/ST and three top students of each division.

- The Library has subscription of National as well as International magazines in the relevant technological and general science areas.

- Membership for external readers including candidates appearing for competitive exams. Over 100 members register annually for this facility.

- Multimedia PCs are maintained for database and other resources access.

- The database repository DSpace is hosting the majority of research publications of the VPM Campus staff.

- Conference proceedings in the Hard and Digital copy form are available for download through our website.

- The centrally air-conditioned Reading room can accommodate over 128 students and separate area for staff research references.

- **Selected students are felicitated with Best Reader Award for their effective use of library resources throughout the year.**

Total number of Books:

Year	Total No. of Books	Titles	Book Bank Sets Issued during the year
2013-14	23238	5594	428
2014-15	24266	7029	636
2015-16	26477	8247	799

Total number of Journals and Magazines:

Year	Educational Journals		General Magazines
	National	**International**	
2013-14	21	3	13
2014-15	20	3	13
2015-16	20	0	12

9.4.2. Internet (10)

Key Features

- Fiber optic network backbone connecting all buildings in campus

- Free, unlimited access to internet for all stakeholders from inside the campus

- Multiple redundant leased lines for internet

- Campus Website

Details

- Name of the Internet Provider   : Intech Online, VSNL, HomeNet

- Available bandwidth   : 38 Mbps

- Wi Fi Availability   : Yes - Reliance JioNet

- Internet access in labs, classrooms,   : Yes

  library and offices of all Departments

- Security Arrangements   : FortigateFireWall 300 C

9.5. Institutional Contribution to the Community Development (5)

1. MKCL - VPM's Polytechnic Partnership

Computer training programmes conducted for more than 3000 candidates with computer literacy through MS-CIT programme and our institute has **received Award of Appreciation for Sustained Partnership from 2004 to 2012 as an MS-CIT Authorized Learning Centre** of Maharashtra Knowledge Corporation Limited (MKCL), Maharashtra State from Local Lead Centre, Thane.

2. Continuing Education Programmes

The Advance Diploma Programmes which are offered as a part of Continuing Education Programmes is helping many working professionals to acquire and upgrade their professional qualifications for career enhancement. Our alumni are working at senior positions at BPCL, ITD Cementation, L&T, Ambuja Cement, Gammon India, Blue Star etc. The Advance Diploma in Industrial Safety programme received IOSH, UK Accreditation for Graduate Membership for the period August 2013 to August 2016.

- Advance Diploma in Computer Software, System Analysis and Applications
- Advance Diploma in Energy Management and Audit
- Advance Diploma in Industrial Safety

3. Energy Conservation Skill Development

Polytechnic has established Energy Management Cell with following objectives

- Adoption of Energy Conservation techniques by young generation
- Planning and implementation for Renewable Energy techniques
- Innovative projects with reference Energy Conservation and Environmental issues.
- CEP for Working Professionals through Advance Diploma in Energy Management and Audit

4. External Membership for Library

Polytechnic has extended Library facility for engineering students and professionals with external membership.

5. Career Fair – Technical Education

- Career Fairs provides an opportunity to the students to know various career options available after Diploma courses.

- Stalls of MSBTE, Polytechnics, Engineering Colleges, and Financial Institutions providing Educational loans.

- Expert lectures to motivate the students for future Career.

- Arranging visit of School students to Polytechnic facilities

- Visiting schools to make presentation about technology courses/careers and admission process

MSBTE Career Fair Organized/Participated

Sr. No.	Day, Month & Year	Organizer
1	4th January2014	V.P.M's Polytechnic, Thane
2	9th January 2014	S.S. Jondhale Polytechnic, Asangaon, Dist. Thane
		G.P. Vikramgad, Thane
3	15thJanuary to 17th January 2014	Manoj Shete College of Engg. & Technology,Kasara, Dist. Thane
4	28th December 2014	Yadavrao Tasgaonkar Institute of Technology, Karjat
		Pravin Patil Polytechnic, Bhayandar
5	5thJune2015	V.P.M's Polytechnic, Thane
		Sardar Vallabhai Patel Polytechnic, Borivali

6. Institutional Social Responsibilities - Activities

Faculty and students are encouraged to participate in collaboration with other organizations in carrying out social outreach programmes such as

- Vigilance Awareness Programmes under the aegis of "Central Vigilance Commission" for Eradication of Corruption in Public Life.

- Blood Donation Camp (Twice in a year)

- Tree Plantation

- Swatchha Bharat Abhiyan

- Waste Management

- Automatic Weather Station - India Meteorological Department (IMD) Government of India.

Declaration

I, Dileep Kumar Krishna Nayak, Principal V.P.M's Polytechnic, Thane (West), Maharashtra State, undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation

Date: 19ᵗʰ November 2016   **Prof. D.K. Nayak**

Place: Thane   **Principal**

Annexure – 1

(A) PROGRAM OUTCOMES (POs)

The students are expected to possess the attributes listed below

PO-1: Engineering knowledge: Demonstrate the knowledge of mathematics, science and engineering.

PO-2: Discipline knowledge: Demonstrate the ability to apply computer engineering – specific knowledge to solve core and applied engineering problems.

PO-3: Experiments and practice: Demonstrate the ability to design and conduct experiments, interpret and analyze data and report results.

PO-4: Engineering tools: Demonstrate the ability to model a live problem or a project that meets desired specifications and requirements using appropriate tools.

PO-5: The engineer and society: Demonstrate the ability to understand the impact of engineering on society, health, safety and legal issues and incorporate them in engineering solutions.

PO-6: Environment and sustainability: Demonstrate the ability to judge the impact of engineering solutions on the environment to achieve sustainable development.

PO-7: Ethics: Demonstrate an understanding of their professional and ethical responsibilities in engineering field.

PO-8: Individual and team work: Demonstrate the ability to function in multidisciplinary or diverse environment as a member or leader of the team.

PO-9: Communication: Develop the ability to communicate effectively with both verbal and written fluency.

PO-10: Life-long learning: Develop the ability to engage in independent and lifelong learning to adapt technological change.

(B) Programme Specific Outcomes (PSOs)

Computer Engineering Diploma holders will

PSO-1: Identify/analyze computer problems and find solution in programming &/or networking.

PSO-2: Select appropriate hardware and software tools to develop circuits/code/ programs.

PSO-3: Test, debug and troubleshoot the developed solution to the problem.

PSO-4: Provide assistance to identify and solve problems at client site.

Annexure – 2

Acronyms related to programme curriculum

Course name	Course Abbreviation	Course code
1st Semester		
English	ENG	C101
Basic Physics	EPH	C102
Basic Chemistry	ECH	C103
Basic Mathematics	BMS	C104
Engineering Graphics	EGG	C105
Computer Fundamentals	CMF	C106
Basic Workshop Practice	WPC	C107
2nd Semester		
Communication Skills	CMS	C201
Engineering Mechanics	EGM	C202
Applied Physics	APH	C203
Applied Chemistry	ACH	C204
Fundamentals of Electrical Engineering	FEE	C205
Engineering Mathematics	EMS	C206
Development of Life Skills	DLS	C207
3rd Semester		
Applied Mathematics	AMS	C301
Data Structure Using 'C	DSU	C302
Electrical Technology	ETE	C303
Relational Database Management System	RDM	C304
Digital Techniques	DTE	C305
Graphical User Interface (GUI) Programming	GUI	C306
Professional Practices-I	PP	C307
Environmental Studies	EST	C401

Course name	Course Abbreviation	Course code
Computer Hardware & Maintenance	CHM	C402
Computer Network	CNE	C403
Microprocessor Programming	MAP	C404
Object Oriented Programming	OOP	C405
Computer Graphics	CGR	C406
Professional Practices-II	PPT	C407
Operating System	OSY	C501
Software Engineering	SEN	C502
Computer Security	CSE	C503
Java Programming	JPR	C504
Windows Programming Using VC++	PWV	C505
Behavioural Science	BSC	C506
Network Management and Administration	NMA	C507
Professional Practices-III	PPT	C508
Management	MAN	C601
Software Testing	STE	C602
Advanced Java Programming	AJP	C603
Advanced Microprocessor	AMI	C604
Linux Programming	LPR	C605
Industrial Project	IPR	C606
Entrepreneurship Development	EDE	C607