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# ANNUAL REPORT

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2017-18



NOVEMBER 1, 2018  
SARDAR PATEL COLLEGE OF ENGINEERING  
Andheri west, Mumbai-58



Bharatiya Vidya Bhavan's  
Sardar Patel College of Engineering  
(Government Aided Autonomous Institute under Mumbai University)



## ANNUAL REPORT

2017-18

Address J P Road, Munshi Nagar, Bhavans College Campus, Andheri (W) Mumbai-58.

Website [www.spce.ac.in](http://www.spce.ac.in)

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## *Founder's Message*



Dr. K. M. Munshi.

*"Education would fail ignominiously in its objective if it manufactures only a robot. A university cannot afford to ignore the cultural aspects of education whatever studies it specializes in. Science is a means, not an end. Whereas culture is an end in itself. Even though you may ultimately become a scientist, a doctor, or an engineer, you must while in college, absorb fundamental values which will make you a man of culture. An engineer has not merely to build bridges; he has to be a devoted husband, a kind father, a friendly neighbour, a dutiful citizen, and a man true to himself. He will have trials and tribulations; his heart will fail him at times; he will then need the strength which true culture alone can give."*

## *From Principal's Desk*

I am pleased to present the 55<sup>th</sup> Annual Report of the Institute. The Institute has started in 1962 and has now completed 55 years. The Institute has celebrated Golden Jubilee in the year. 2011-12. The Institute has been granted autonomous status by UCG in June 2010. This report presents summary of activities at the institute since the previous annual day event. SPCE has received autonomy in 2011 and extension of autonomy in 2016. SPCE is also a recipient of the TEQIP grant from MHRD and was selected for TEQIP II and TEQIP III projects in continuation. The institute got accredited in 2004, 2008 and 2017. The faculty of SPCE is actively engaged in testing, consultancy and Research. Students have shown exemplary achievements in higher studies and competitive exams. SPCE practices Choice Based Credit system and involves the Alumni and Industry in framing the syllabus actively. We take pride to share that the curriculum is Industry 4.0 aligned to support 4<sup>th</sup> Industry Revolution.

Dr. Priyadarshi H Sawant

## A. Bharatiya Vidya Bhavans

Founded on November 7, 1938, on the auspicious Kartik Sud Purnima, Samvat 1995, nearly a decade before the advent of Independence, with the blessings of Mahatma Gandhi and co-operation and support of several distinguished stalwarts of India's freedom movement, the Bharatiya Vidya Bhavan has grown, from small beginnings, into a comprehensive all-India intellectual, cultural and educational movement. It is totally apolitical.

Its founder, Kulapati Dr. K.M. Munshi, looked upon the Bhavan as an 'Adventure in Faith', a faith in India's past, present and future. It is also a faith in India's people who have a rich and unbroken cultural heritage.

True to its goal of revitalising Dharma or the Moral Law in its three-fold aspects of Truth, Love and Beauty - Satyam, Shivam, Sundaram - the Bhavan is ceaselessly striving to carry forward India's ageless message of Faith, Self-discipline and Dedication - Shraddha, Samyama and Samarpana.

The Bhavan believes that there are elements in all cultures which transcend all barriers and knits people together. Its ideal is: Vasudhaiva Kutumbakam: "The World Is One Family." Its motto is Aa no bhadraah kratavo yantu vishwatah: "Let noble thoughts come to us from every side."

During the last six decades and more of its existence, the Bhavan has blossomed into an ever-growing, voluntary, apolitical national movement with an international outlook, devoted to life, literature and culture. The Bhavan has around 325 schools in India and 7 overseas centers.

Bhavan's programmes cover "all aspects of life from the cradle to the grave and beyond....it fills a growing vacuum in modern life" as Pandit Jawaharlal Nehru observed when he first visited the Bhavan in 1950.



"The wide range of the Bharatiya Vidya Bhavan's activities and the success they have achieved can only be described as most remarkable."

**Bharat Ratna Dr. C.V. Raman, Nobel Laureate**

- **TRUST**

Founder:	KULAPATI DR. K. M. MUNSHI
President:	SHRI. SURENDRALAL G. MEHTA
Vice-President:	SHRI BANWARILAL PUROHIT

• **HONORARY MEMBERS**

HIS HOLINESS THE DALAI LAMA	SHRI MOTILAL C. SETALVAD
PRINCE CHARLES	DR. A. L. MUDALIAR
HRH THE PRINCE OF WALES	ACHARYA JINAVIJAYA MUNI
SMT KISHORI AMONKAR	DR. V.V. GIRI
SMT ELA RAMESH BHATT	DR. R.C. MAJUMDAR
SHRI N. R. NARAYANA MURTHY	SHRI S.K. PATIL
SWAMI AKHANDANANDA	DR. G.S. PATHAK
SWAMI GANGESHWARANANDA	SHRI G.D. BIRLA
SWAMI CHINMAYANANDA	RT. HON. HAROLD MACMILLAN
SHRI C. RAJAGOPALACHARI	LORD FENNER BROCKWAY
PANDIT JAWAHARLAL NEHRU	DR. R.R. DIWAKAR
SARDAR VALLABHBHAI PATEL	JUSTICE SHRI M. HIDAYATULLAH
DR. RAJENDRA PRASAD	SHRI J.R.D. TATA
DR. S. RADHAKRISHNAN	SHRI MORARJI DESAI
DR. ZAKIR HUSAIN	SHRI NEELAM SANJIVA REDDY
DR. FAKHRUDDIN ALI AHMED	REV. MOTHER TERESA
SHRI JAYAPRAKASH NARAYAN	DR. K. SHIVARAMA KARANTH
SHRI SRI PRAKASA	SHRI S. NIJALINGAPPA
SHRI CHIMANLAL H. SETALVAD	SWAMI SATCHIDANANDA
SIR C.P. RAMASWAMI AIYAR	LORD CALLAGHAN
MAHAMAHOPADHYAYA DR. P.V. KANE	SMT. M.S. SUBBULAKSHMI
SHRI B.G. KHER	PROF. (DR.) A.N. MOORTHYRAO
SHRI MEGJI MATHRADAS	SRI CHINMOY

• **TRUSTEES**

SHRI SURENDRALAL G. MEHTA	SHRI DEEPAK S. PAREKH
SHRI BANWARILAL PUROHIT	SMT. SHOBHANA BHARTIA

SHRI AVNISH MEHTA	SHRI I. R. KHANDWALA
SHRI HARSH VARDHAN KANORIA	SHRI MUKUL A. SONAWALA

• **EXECUTIVE COMMITTEE**

President:	SHRI. SURENDRALAL G. MEHTA
Vice-President:	SHRI BANWARILAL PUROHIT
Hon. Secretaries:	SHRI MUKUL A. SONAWALA
	SHRI KIRTIDEV G. MUNSHI
Hon. Treasurer:	SHRI I.R. KHANDWALA
Executive Secretary & Director General:	SHRI H.N. DASTUR
Members:	SHRI AVNISH MEHTA
	SHRI DEEPAK S. PAREKH
	SHRI C.R.GHAREKHAN
	SHRI SHREEHARI G. ANEY
	SMT ANJANA A. SONAWALA
	DR. ASHOK SHEKAR GANGULY
Directors:	SHRI V.V. BHASKARAN
	SHRI P.N. SANTHANAGOPAL
Director (Sanskritic Studies & Research):	PROF. S.A. UPADHYAYA
Director (Bhavan's Shikshan Bharati):	SHRI RAKESH SAXENA
Director (Administration & Legal):	DR. RAJENDRA SINGH (IAS-Retd.)
Joint Directors:	SHRI P.V.SANKARANKUTTY
	SHRI YOGESH KAMDAR
Director (Bhavan's Colleges):	PROF. S.G.CHITALE
Addl. Director (P.G. & Research):	DR. G.B. JANI
Advisor (Research & Development):	SHRI RAMESH OZA
Hon. Director (Finance & Accounts):	SHRI JEEVRAJ OSTAWAL
Superintendent (Accounts):	SHRI JASVANTLAL V. SHAH
Additional Chief Accountant:	SHRI P.M. MADKAIKAR
Additional Registrar:	SHRI RAMESH KUMAR K.

## B. Sardar Patel College of Engineering

### About SPCE

In 1957, the Bharatiya Vidya Bhavan (BVB) conceived the idea of establishing an engineering college in Mumbai. The Engineering Personnel Committee of the Planning



Commission had made certain recommendations for the establishment of new engineering colleges and polytechnics, in order to increase the technical manpower in the country. The parent body, Bharatiya Vidya Bhavan was among the first educational trusts to have realized this need and further the interests of aspiring engineering students and also meet the needs of the challenging world of business. The proposal of the BVB to start an engineering college was favorably received by both the Central and State governments. The total outlay of this project was Rs.70 lakhs. The central and state governments contributed Rs.20 lakhs and Rs.10 lakhs respectively while the Bhavan contributed Rs.28 lakhs. The Sardar Patel Memorial Hall Committee and the Nizam's Charitable Trust donated Rs.1 lakh each and the remaining amount of Rs.10 lakhs was collected by means of grants, donations and advertisement revenues.

Sardar Patel College of Engineering under the management of the Bharatiya Vidya Bhavan's was founded by Kulapati Dr. K.M. Munshi. It was established to meet the growing demand for engineering talent. The foundation stone of the college was laid on 17th September 1961 by Shri Y.B. Chavan (the then chief minister of Maharashtra who later became the defence minister of India) who had taken a keen interest in the fulfilment of the project. Sardar Vallabhbhai Patel was closely associated with the BVB. It was thus decided that naming the Engineering College after the late Shri Sardar Patel would be a fitting tribute to the "Iron Man" of India. The college was inaugurated by the first Prime Minister of Independent India, Pandit Jawaharlal Nehru in 1962.

BVB's Sardar Patel College of Engineering (SPCE) was established in 1962 as a Government Aided Engineering College. It was started with three conventional courses, viz., Civil, Electrical and Mechanical with an intake of 40 in each branch which was subsequently increased to 60. The institute is permanently affiliated to University of Mumbai for full-time degree, post graduate degree courses and PhD Programs.

Over the last 55 years the college has gained an excellent reputation in the field of Technical Education. SPCE has Grade "A" rating engineering college from Govt. of Maharashtra has maintained a proud tradition of excellent academic records by securing high ranks, gold medals and other awards. The college has produced many graduates and Post-Graduate Engineers, many of our past students are now leaders in their professions. SPCE Alumni can be found in all public and private sector organizations operating in diverse fields, often holding senior and key positions in the organization. This is the first

college (affiliated to Mumbai University) to start Part- Time Degree Courses (PTDC). All part-time courses attracted good response and were well appreciated by diploma holders and engineering graduates in industries.

SPCE has successfully implemented innovative ideas in the field of Technical Education. The institute is a recognized PhD and QIP centre. It has become autonomous since 2010 and is one of the TEQIP- II and TEQIP-III institute. The institute has emerged as one of the top engineering institutes of the state, stands apart as a symbol of quality in engineering education. It has evolved over the years into a citadel of engineering thought and learning. This has been possible because of the dedication of its competent faculty, committed students, its mission to influence the quality of engineering education in industry and the ability to bridge the gap between an academic institution and a challenging business world.

## Vision, Mission and Core Values

### **VISION**

Sardar Patel College of Engineering (SPCE) aspires to be an institution of national repute that will create professionals with competence and motivate research for the progress of the nation.

### **MISSION**

- To impart quality education through time relevant curriculum in academic programs.
- To enhance career opportunities for students through industry institute interaction and value added course.
- To promote excellence by encouraging innovative ideas and lateral thinking.
- To inculcate sense of discipline and responsibility towards society.

### **CORE VALUES**

- Innovation and Creativity
- Empathy and Social Responsibility
- Service to the Nation and Mankind
- Leadership and Enterprise
- Good Governance and Transparency

## C. Academic Programs

### 1. GRADUATE PROGRAMS

<b>Degree</b>	<b>Stream</b>	<b>Duration</b>	<b>Intake</b>
B.Tech.	Civil Engineering	Full Time / 4 Years	60
B.Tech.	Mechanical Engineering	Full Time / 4 Years	60
B.Tech.	Electrical Engineering	Full Time / 4 Years	60

### 2. POST GRADUATE PROGRAMS

<b>Degree</b>	<b>Stream</b>	<b>Duration</b>	<b>Intake</b>
M. Tech. (Civil)	Structural Engineering	Full Time (2 Years)	13 + 5*
M. Tech. (Civil)	Construction Management	Full Time (2 Years)	13 + 5*
M. Tech. (Mechanical)	Machine Design	Full Time (2 Years)	13 + 5*
M. Tech. (Mechanical)	Thermal Engineering	Full Time (2 Years)	13 + 5*
M. Tech. (Electrical)	Power Electronics & Power Systems	Full Time (2 Years)	13 + 5*

### 3. DOCTORAL PROGRAMS

<b>Degree</b>	<b>Stream</b>
Ph.D. (Civil)	Civil Engineering
Ph.D. (Mechanical)	Mechanical Engineering
Ph.D. (Electrical)	Electrical Engineering

### 4. QIP PhD PROGRAM

The main objective of the programme is to upgrade the expertise and capabilities of the faculty members of the degree-level engineering institutions, National Institutes of Technology (NITs) and the National Institutes of Technical Teachers Training and Research (NITTTR) in the country. The programme launched by the Government of India in the year 1970, is now being implemented and monitored by the National QIP Coordination Committee, funded through the AICTE. The eight major QIP Centre's at IITs and IISc undertake the various activities. Admissions to Ph.D. programmes are also offered in selected areas in institutions recognized as

Department of Civil Engineering is selected as one of the minor center. There are three main activities under QIP center carried out for the faculty of degree-level engineering institution.

5. **AUTONOMY** : Sardar Patel College of Engineering has been granted autonomy and extension of Autonomy for the period mentioned as follows:

Sr. No.	Conferment Authority	Period	Autonomous Status
1	University Grants Commission	2010-11 to 2015-16	Fresh Autonomy
2	University Of Mumbai	2010-11 to 2014-15	
1	University Grants Commission	2016-17 to 2021-22	Extension of Autonomy
2	University Of Mumbai	2015-16 to 2020-21	

6. **AICTE APPROVAL**: Institute has been getting AICTE approvals from time to time.

## 7. ACCREDITATION

### 1. NBA Accreditation:

Sr. No.	Name of Programme(s)	Accreditation Status	Period
1	Civil Engineering (UG)	Accredited	2004 to 2007
2	Mechanical Engineering (UG)		
3	Electrical Engineering (UG)		
1	Civil Engineering (UG)	Accredited	2008 to 2011
2	Mechanical Engineering (UG)		
3	Electrical Engineering (UG)		
1	Civil Engineering (UG)	Accredited	2017 to 2020
2	Mechanical Engineering (UG)		
3	Electrical Engineering (UG)	Application in progress	
4	Construction Management (PG)	Accredited	
5	Thermal Engineering (PG)		
6	Machine Design (PG)		
7	Power Electronics & Power Systems (PG)	Application in progress	
8	Structural Engineering (PG)		

2. **NAAC Accreditation**: SPCE is in process of applying for NAAC accreditation.

## 8. RANKING

1. NIRF 2017 Ranking: SPCE ranked in the 101-150 band all over the Country
2. NIRF 2018 Ranking: SPCE ranked between 150 to 200 band all over the Country

## D. Departments & Sections

### 1. Civil Engineering Department:

The Civil engineering department has been in existence since the establishment of this institute. The department has an excellent infrastructure and is AICTE approved and accredited by the National Board of Accreditation (NBA), New Delhi. The department has expertise in the field of Structural Engineering, Transportation Engineering, Water Resources Engineering, Construction Management, Geo-technical Engineering, Materials Engineering, Hydraulics and Fluid Mechanics, Surveying, and Construction Engineering.

Apart from the undergraduate course, postgraduate courses offered in Construction Management and Structural Engineering. The department is approved by University of Mumbai for the Ph. D. program. In addition, the department is a minor QIP Center. The department is actively engaged in Testing & Consultancy work and Unnat Bharat/Maharashtra Abhiyan (UBA/UMA) activities.

Recently UG program and PG Program (Construction Management) were accredited by NBA. The Program Outcomes (PO), Program Educational Objectives (PEO) and Program Specific Objectives (PSO) are available with departments.

#### **Vision**

To build a reputed department that will produce competent, committed and socially responsible professionals.

#### **Mission**

- To impart knowledge in civil engineering and allied fields through a dynamic curriculum.
- To promote commitment towards excellence.
- To create awareness about and encourage socially responsible civil engineering practices.

#### **Academic Highlights**

- The B.Tech. (Civil Engineering) program was awarded **accreditation (tier-I) by NBA** for period of AY2017-18 up to 2019-20. The M.Tech. (Construction Management) program was awarded accreditation for period of AY2017-18 up to 2018-19.

## Department Activities

### ➤ Workshop by Experts from Industry

- Two days Workshop on “Bridge Architecture & Inspection” 5<sup>th</sup> & 6<sup>th</sup> December 2017. Lectures by Dr.V.K.Raina for the students of F.Y.B.Tech & M.Tech structures.

### ➤ Training Programmes Organized

- Organized Two Software Training Programmes in ETABS & SAFE for B. Tech (Civil) and M.Tech (Struct.) students under TEQIP.

### ➤ UMA/UBA Activities:

SPCE CED is actively working on UMA activities.Under UMA PG students are working on Jalayukt Shivar Yojna assessment work in Karjat Taluka Dist.Raigad. Students are also working on various projects of Rural infrastructure assessment and improvement. Dr. A. R. Kambekar is coordinating the various activities in coordination with CTARA IITB.

## Faculty Achievements

### Dr.A.R.Kambekar:

- Member international scientific advisory committee, 2018 International Conference on Civil, Architectural and Environmental Engineering (ICCAEE 2018)[www.iccae.net](http://www.iccae.net)Wellington, New Zealand, (Dec 10-12, 2018).
- Member INTERNATIONAL ACADEMY OF SCIENCE AND ENGINEERING FOR DEVELOPMENT (IASSED) Hongkong [www.iased.net](http://www.iased.net)

**Dr.Hansa Jaswani:** Gold Medal and Certificate from IIT Madras for Outstanding contribution in the field of Civil engineering on International Women's day 2017

- Reviewer from International waterworks publication journals including water science and technology for the year 2017-18 to 2019-2020

## Summary of AICTE/TEQIP Mandate Information during 2017-18

- Number of Pedagogy training programs attended = 03
- Number of OBE workshops attended = 02

- Number of STTP/Workshops attended = 03
- Number of TEQIP – III training programs attended = 09
- Number of guest lectures arranged = 08
- Number of expert lectures delivered at other institutes = 04
- Number of industrial visits organised = 03
- Number of technical publications in international journals = 16
- Number of technical publications in international conferences = 09
- Number of research projects conducted in collaboration with industry = 04
- Number of new courses offered in 2017-18 = 09
- Number of ICC constituted for courses taught by faculty = UG 13 + PG6
- Number of faculty registered for SWAYAM portal for certification course = 09
- Number of faculty obtained certification on at least one SWAYAM course: 01

### **Student Activities**

- M.Tech student Miss. Anam Sayed received Young Innovator Award- 2018 from” ZEE – Media “for research work on Waste to Energy.
- No. of Final year students passed for GATE-2018: 25
- No. of Final year students passed GRE & enrolled for Higher Education: 06
- No. of Final year students passed for CAT & got admission in IIM:01
- No. Paper Publications in Journals & Conferences: 24
- Workshop / Expert talk organized Through CEA: 01 , 02
- The research paper titled “Impact of cost drivers and identifying alternative materials for storm water drainage system for the national highway Project” by Geetanjali Joshi and A. R. Kambekar (2018):” in Research Conclave 2018, Indian Institute of Technology Guwahati, 17-20 March Guwahati, India has Received Best research Poster presentation award.



## Budgeted and Actual Expenditure for UG Programme at CED (FY 2017-18)

(All amounts in Rs.)

Sr No	Expense Heading	Allocated Budget (2017-18)	Actual Expenditure (2017-18)
1	Concrete Laboratory	4,00,000.00	51,292.00
2	Material Testing Laboratory	3,00,000.00	76,727.00
3	Strength of materials	1,00,000.00	12,442.00
4	Geotechnical Engineering	50,000.00	14,000.00
5	Transportation Engineering	75,000.00	23,979.00
6	Environmental Engineering	1,50,000.00	34,222.00
7	Hydraulic Engineering	1,50,000.00	--
8	Fluid Mechanics	1,00,000.00	14,199.00
9	Geology	50,000.00	--
10	Surveying	1,50,000.00	64,140.00
11	Computer Center/ Geo Informatics Laboratory	1,00,000.00	5,814.00
12	Civil Engg. Lab. Consumable	--	2,96,815.00
13	Civil Engineering Department Office	1,00,000.00	--
14	Civil Engineering Project	2,00,000.00	--
<b>Total</b>		<b>19,25,000.00</b>	<b>2,96,815.00</b>

Dr. Mohan Murudi

Head CED

## 2. Electrical Engineering Department

The strength of Department of Electrical Engineering is its faculty, students, supporting staff and alumni. Faculty of the department are motivated by their goal to transform young engineering students to skilled and proficient Electrical Engineers. The Department strives to offer its students excellent instructional and educational opportunities in electrical engineering, thus providing a durable technical foundation in an environment of rapid technical change. In this process, it enables and promotes their professional growth through contact with best professional practice. The department thus tries to play a role of resource and technical leadership in a national level development activities. It is possible if major players in the game that is faculty, infrastructure and industry are well equipped. In this light following goals are identified.

**Vision:** Department of Electrical Engineering aspires to produce socially responsible and dedicated electrical engineer by providing conceptual learning that enhances research based activities.

### **Mission**

- To educate through classroom teaching along with intensive practical activities and promote academic excellence with the help of expertise in different fields of Electrical Engineering from industries and academic institutes.
- To promote innovative ideas through seminars and projects.
- To bring awareness of social responsibilities as an Electrical Engineering.

### **Academic Activities:**

**Curriculum:** The department offered the following new regular, elective and value added courses for students. New elective courses are useful for the students continuing higher studies whereas value added courses are helpful to them while implementing B. Tech. projects. Soft computing courses offered for S.Y. and T.Y. students are useful for understanding many Electrical Engineering concepts.

- Image Processing (Elective)
- Modern Control Theory (Elective)
- Environmental Engineering and Management Studies (Regular)

- Soft Computing I (Value Added)
- Soft Computing II (Value Added)
- Digital Signal Processing for Power Control (Value Added)

**Industry offered Elective:** The elective course Industrial Automation for Semester VIII is designed and by Industry Expert (Mr. A. Ghosh from L & T).

**Guest Lectures:** The following guest lectures are arranged for B. Tech. and M. Tech. students during AY2017-2018:

- “DSP interface with voltage and current sensor with PC” engaged by Ms. Kavita Hiredesai on 06/02/2018 and 08/02/2018
- "Experiences in Smart Grid Implementation" engaged by Mr. Vijay L Sonavane, Hon.Advisor, India Smart Grid Forum, New Delhi, Former Member(Tech) MERC Mumbai, Former Director (Projects)MSEDCL Mumbai on 20/04/2018

**Industry visits arranged:**

- L and T for final year students (opted for Elective Industrial Automation)
- Virar Railway Loco Shed in last week of April 2018.for final year B.Tech students (opted for Elective Traction)

**Workshop for students:** The department has organized workshop on “Beginners to Python” on April 14-15, 2018 for students. Our final year student Mr. Narpat Suthar has engaged theory and practical sessions during this workshop.

**Achievements:**

- Faculty:** The following faculty has up graded their qualification
  - Ms. Swati Lawand: Completed her Ph. D. from IIT, Bombay
  - Ms. Prajakta Joshi completed M. Tech in Power Electronics Power System
  - Ms. Matilda Jusine completed M. Tech in Power Electronics Power System
  - Ms. Ushma Shah completed M. E. in Electronics and Telecommunication
  - Award: Dr. Swati Lawand received POSOCO Power System Award 2018 for her research work.

- The following faculty has attended Induction Programme at COEP, Pune : Dr. B. B. Pimple Dr. Anupa Sabnis and Prof. V. P. Joshi.

**b) Students:**

- Electrical Engineering Students Association (EESA) is active throughout the year. The students conducted and participated in many technical and extra curricular activities like SPECTRA, EESA cup etc. under the guidance of department faculty Mr. Rahul Chavan and Mr. Vishal Dake.
- Fourteen students are qualified in GATE examination and Mr. Vaikund Sudarshan is the topper among them with AIR 1043. Two of our alumni Mr. Kharde Hrishikesh and Ms. Swati Patil secured AIR 15<sup>th</sup> and 24<sup>th</sup> respectively.
- UG and PG students have published papers in various international conferences. One of our UG team (Ms. Neha Akode, Ms. Alisha Gedam, Ms, Vidhi Jain, Mr. Ankur Singhanjude) won Excellent paper award by IRAJ Research Forum.

c) **Supporting staff:** Nine of our supporting staff have attended workshop on Civil Defence and four of them have attended three days Induction Program under TEQIP III.

d) **Other:** MOU has been signed on 23/04/2018 with Power System Operation and Control (POSOCO) for the collaboration in the domain of Power System.

**Summary of AICTE/TEQIP Mandate Information during 2017-18**

- Number of research conferences/seminars attended = 5
- Number of OBE workshops attended = 1
- Number of STTP/Workshops attended = 3
- Number of guest lectures arranged = 2
- Number of industrial visits organised = 2
- Number of technical publications in international conferences = 19
- Number of new courses offered in 2017-18 = Regular: 01 Elective: 02 Value Added:03
- Number of ICC constituted for courses taught by faculty = 8 UG
- Number of faculty registered for SWAYAM portal for certification course = 7
- Number of students appeared for GATE-2018 examination = 32

**Department Budget and Expenditure in AY 2017-2018**

Sr. No.	Name of Laboratory	Budget Amount in Rs	Expenditure in Rs.
1	Electrical Machine Lab	90,000	20,374.00
2	Renewable Lab & Electrical Drives Lab	80,000	26,500.00
3	Electronics & IC	80,000	0.00
4	$\mu$ p, $\mu$ c & Robotics (VLSI and Embedded)	90,000	7,416.00
5	Communication & DSP	80,000	16,584.00
6	Switchgear & Power system Computation	65,000	0.00
7	Control System	75,000	2,449.99
8	Power Electronics	80,000	0.00
9	PLC & Industrial Automation	80,000	0.00
10	Electrical Measurement	80,000	77,408.00
11	EED ADMIN OFFICE	50,000	18,462.00
12	UG Projects	1,50,000	69,062.64
	Total	10,00,000	2,38,256.63

Dr Anupa Sabnis

Head, EED

### 3. Mechanical Engineering Department

Mechanical Engineering Department of Sardar Patel College of Engineering commenced in 1962. The department has modern infrastructure with well- equipped laboratories and computational facilities with up-to-date hardware and software resources. The well qualified and experienced faculty of the department imparts knowledge to the students in the fundamental and applied aspects of Mechanical Engineering courses by adopting conventional as well as the latest teaching and assessment tools.

Each of the academic programmes includes frequent industrial visits for our students to expose them to real life engineering scenario. Students are acquainted with cutting edge technologies through industrial guest lectures, industry sponsored projects and industrial internships. Students benefit from association with professional organizations such as ASHRAE, ISHRAE, IET, MCOM, SAE and IIME. The curriculum for each programme is continuously updated to keep it in sync with needs of industry and current research developments. The department takes keen interest in inculcating an attitude and temperament for practicing ethics in the mind of students and preparing them for being part of collective efforts for nation building.

We feel proud to inform that our alumni are at top executive positions at various enterprises such as L&T, Aker Solutions, ThyssenKrupp, Reliance, Siemens, Mercedes, Coca-Cola, Infosys, Wipro and innumerable manufacturing & service organizations. Our undergraduate students regularly get admitted for higher studies in the top national and international universities.

a) **Vision:** To be a Nationally recognized Mechanical Engineering Department producing a blend of responsible & competent engineering graduates with inculcation of human values in next five years.

b) **Mission**

- To impart need based technical education by designing curriculum in collaboration with stakeholders
- To develop linkages with renowned industries in India & abroad for excellence in teaching & research
- To provide state of art laboratories to impart field knowledge to mechanical engineering students

- To encourage the students to participate in extracurricular activities for overall personality development and be a responsible person of the society.

#### c) Academic Highlights

- The B.Tech. (Mechanical Engineering) program was awarded **accreditation (tier-I) by NBA** for period of AY2017-18 up to 2019-20. The M.Tech. (Machine Design) and M.Tech. (Thermal Engineering) programs were awarded accreditation for period of AY2017-18 up to 2018-19.
- The department offered **new value-added courses** for the benefit of students during AY2017-18 which were enthusiastically opted by students. The names of these courses are: Internet of Things (IOT), CNC Programming, MEMS, Compliant Mechanisms, Advanced Solid Mechanics, Lean & Green Manufacturing, Digital Manufacturing and Introduction to Cryogenics.
- Dr. R. B. Buktar introduced **Augmented Reality (AR) as an innovative teaching and learning tool** for conducting course of Engineering Graphics for 1<sup>st</sup> year C/M/E students.

#### d) Department Research Activities

- **Mumbai University Minor Research Grant: Dr. R. S. Maurya, Dr. Kiran Bhole and Prof. Haseen Shaikh** received Minor Research Grant from Mumbai University for Rs. 30,000/-, Rs. 35,000/- and Rs. 40,000/- respectively.
- **RGSTC Research Grant (Second Year phase) to Dr. R. S. Maurya:** Dr. R. S. Maurya received grant for Rs. 15.34 Lakhs from RGSTC, Govt. of Maharashtra. Currently the project is running in its second-year phase.
- **DST Research Grant (Second Year phase) to Dr. K. S. Bhole:** Dr. Bhole has received a grant of Rs 20 Lakhs from Science and Engineering Research Board of Department of Science and Technology, Government of India. Currently the project is running in its second-year phase.

#### e) Faculty Achievements

- Dr. B.N. Bhasme received his doctoral degree from IIT Bombay. His thesis title is “An Experimental Investigation of Near Wake of a Circular Cylinder with a Short Plate in Asymmetric Tandem”.

- Dr. Sudhakar Umale, Mechanical Engineering Department, SPCE, has received the prestigious “SAEINDIA GURU AWARD 2016-17” from SAEINDIA Foundation.
- Dr. Sudhakar Umale was elected as member of governing body of SAEINDIA, western section.
- Dr Santosh Rane, and his PhD research scholars Mr. Prathmesh Potdar and Mr. N. K Mishra received the National Productivity Award - Platinum Grade in National Productivity Competition organized by Indian Institute of Industrial Engineering at JNEC on 15th Sept 2017.
- Prof. Parag Muley participated in the prestigious Asian School on Superconductivity and Cryogenics for Accelerators (ASSCA-2017) held at Tsukuba, Japan.
- Prof. Kunal Bhavsar received ISHRAE Society Service Award as Youth Chair and Student Activity Chair of ISHRAE MUMBAI CHAPTER for year 2017-18.

**f) Interactions with Industry and outside world by Department**

- Heat Pump Water Heating System was installed at SPCE hostel in Collaboration with Emerson, India, for carrying out comparative study against the conventional electric resistance water heating systems.
- MoU has been signed with FESTO, India for collaboration in the domain of Industrial Automation, Mechatronics and allied technologies
- Dr. R. B. Buktar collaborated with Mahindra & Mahindra, Nagpur, to initiate research projects related to Augmented Reality and Digital Manufacturing for his doctoral and M.Tech. Students.

**g) Summary of AICTE/TEQIP Mandate Information during 2017-18**

- Number of Pedagogy training programs attended = 1
- Number of research conferences/seminars attended = 5
- Number of OBE workshops attended = 1
- Number of STTP/Workshops attended = 6
- Number of TEQIP-III training programs attended = 2
- Number of training programs attended, which were conducted by industry = 1
- Number of guest lectures arranged = 7
- Number of expert lectures delivered at other institutes = 9



- Number of industrial visits organized = 8
- Number of technical publications in international journals = 4
- Number of technical publications in international conferences = 25
- Number of research projects conducted in collaboration with industry = 4
- Number of new courses offered in 2017-18 = 13
- Number of ICC constituted for courses taught by faculty = 8 UG + 4 PG
- Number of faculty registered for SWAYAM portal for certification course = 14
- Number of faculty obtained certification on at least one SWAYAM course = 4
- Number of students appeared for GATE-2018 examination = 26

#### **h) Student Activities**

- Lt. Rohit Patwardhan (B.Tech., Mech., SPCE, 2017) was awarded the prestigious SILVER MEDAL as the Best Technical Graduate Cadet by Indian Army in June 2018.
- Thermal Engineering Students Association (TESA-SPCE), was incepted on 30/10/2017 under mentorship of Prof. Parag Muley.
- The SPCE racing junior team obtained 2nd place in Design presentation and 23rd place overall at the Indian Karting Championship 2018.
- ISHRAE SPCE Achievements
  1. ISHRAE SPCE ISTL Team (Rakshit Shetty, Pawan Patel, Rohitkumar Gupta, Aditya Kamat, Shivani Mohite and Garima Chavan) has bagged 1st runner up prize at ISHRAE Student Technical League, ISTL-2017-18, event held at Mumbai.
  2. Pawan Patel (T.Y.B.Tech.) and Rakshit Shetty (Final Year B.Tech.) got First runner up in Jamboree which is Student Extravaganza for ISHRAE Mumbai Chapter Students.
  3. Aditya Kenge, T.Y.B.Tech. student, got 1st Runner Up in Technical Paper Presentation Award in Jamboree.

**Budgeted and Actual Expenditure for UG Programme at MED (FY 2017-18)**

<b>Sr. No.</b>	<b>Expense Heading</b>	<b>Allocated Budget (2017-18)</b>	<b>Actual Expenditure (2017-18) Rs</b>
1	Internal Combustion Engine Lab.	95,000	13,567
2	Refrigeration and Air-conditioning Lab.	70,000	77,249
3	Thermal Engineering Lab.	50,000	15,020
4	Heat and Mass transfer Lab.	70,000	15,655
5	Theory of Machines and Vibration Lab.	50,000	8,027
6	Metrology and Measurement Lab.	50,000	25,840
7	CNC Lab.	80,000	1,37,561
8	Mechatronics Lab.	70,000	15,730
9	CAD/CAM Lab.	83,000	---
10	Material Science Lab.	70,000	46,515
11	Workshop expenditures	3,70,000	2,98,333
12	UG student project expenditures	2,00,000	---
13	Department office expenditures	30,800	1,41,257
<b>Total</b>		<b>12,88,800</b>	<b>7,94,754</b>

Dr. Nilesh Raykar

Head, MED

#### 4. Examination Section

Examination Section is committed to be recognized as an institution that is a pace setter for following the examination calendar, declaring results in time and also committed to expanding the horizon and inspiring young minds towards academic excellence.

##### **Best Practices Adopted in Examination Section**

- Examination Calendar is reviewed and prepared before the start of the semester uploaded on website and followed scrupulously. Display of T1, T2, End Semester and Re-examination time table uploaded on website in the first week of the semester for an entire year.
- Every year an annual report is prepared by Examination Committee.
- A Handbook of examination section is prepared providing guidelines for smooth functioning of examination section.
- Appointment letters to Examiners and Faculty at the start of the semester.
- Synoptic submitted by faculty with manuscripts. Display of Grades on Notice Boards as per the calendar dates.
- Provision of giving provisional passing certificate to B.Tech and M.Tech students along with grade sheets.
- Transparent Examination System by showing the students assessed answer Books with synoptic.
- Specific dates allotted for showing of answer books and followed scrupulously by all faculties.
- Re-Examination for students every semester.
- Audit of question papers, answer books, synoptic, coverage of syllabus and exam procedure by expert faculty from other institutes.
- Examination section conducts entrance examinations for other organizations and institutes.
- A Redressal Committee is formed by the Chairman of the committee to look into Malpractices / Unfair Means during examinations as per Maharashtra Act 1982.

## 5. Training & Placement Office

To offer information, advice, career-guidance and job-seeking support for students are the primary objectives of the T & P Office.

### **Major activities of T & P Office**

#### **1. Trainings**

T & P Office of SPCE train our students to fit the Corporate World requirements - both in terms of moral fiber and knowledge. With this goal in mind, the T & P Office conducts employability assessment tests and various pre- and post-recruitment trainings, career guidance seminars through the Finishing School, established as per the norms of TEQIP. T & P Office have utilized around Rs. 15 lacs from TEQIP funding till academic year 2014-15 for various training initiatives.

#### **2. SPLICE (SP Learning Initiative for Career Enhancement)**

SPLICE is an initiative to bring SPCE Alumni and students together to help each other. SPLICE by dictionary means a junction where two ends meet. The objective of SPLICE is experience sharing and knowledge transfer from Alumni to current students. Under SPLICE, T & P Office conducts mock placement drive for current students with the help of Alumni. Assessment partners of recruiters set the papers for mock placement drives. This initiative helps students to understand the placement process and prepare accordingly.

#### **3. Industry Institute Interaction**

T & P Office of SPCE nurtures Industry Institute Interaction, by organizing and coordinating industrial visits, internships and projects of industrial relevance for the students. Over the years, the T & P Office has maintained symbiotic, vibrant and purposeful relationship with Industries across the country.

#### **4. Camps Recruitments**

Every year we supply hundreds of professionally qualified Engineering Graduates to these companies with the intent to infuse talent, vigor and novelty into the Corporate World. Some of the prominent and regular recruiters at SPCE are Mahindra & Mahindra, Tata Housing, Tata Power, Tata Motors, Tata Consulting Engineers, UHDE India, Aker Solutions, Reliance

Industries Ltd., Toyo Engineering, L & T Engineering, L & T Construction, ACC Cement, Siemens, Alfa Laval, Mu Sigma, etc.

As a result of highly focused and continuous efforts of T & P Office, we have built up an impressive placement records.

Many students also fetch multiple job offers. The salaries offered are in the range of Rs. 3.5 Lac to Rs. 11.00 Lac per annum. T & P Office strives hard to provide our students with the best avenues to utilize their skills by helping them find gainful employment with the best of the Engineering firms.

### **5. Finishing School**

T & P Office also coordinates Finishing School activities as a part of TEQIP Project. Finishing School is established with an intention to increase institutional focus on providing academic guidance and support to the SC/ST/OBC and academically weak students.

The key activities under the aegis of this Finishing School are,

1. Conducting remedial teaching throughout the academic sessions for improving transition rate and pass rate of students
2. Conducting specialized soft skills and professional skills development training during semester-breaks and vacations (preferably starting from 5th Semester onwards) for increasing employability,
3. Conducting high intensity training (of at least 4-weeks duration) for development of soft and professional skills in the students that graduate but fail to secure any employment, and
4. Organizing campus interviews and making other efforts to secure employment for graduate engineers.

As a part of Finishing School activities, a *diagnostic test (employability skills assessment test)* is conducted for F Y B Tech students.

The Diagnostic Test helped institution to measure following skills and competencies of the students:

- Aptitude Skills,
- Workplace Skills,
- Personality Factors.

Assessment of these skills provided students' the quantitative inputs and helped in measuring competencies for specific tools. It also helped students to find the job profile most suitable for their personality and gave an idea about areas of improvement. On the basis of performance of students in the Diagnostic Test, various pre-placement trainings are organized under Finishing School.

This pre-placement Training program is of 50 hrs. duration and covers following modules:

- Soft Skills (20 hrs)
- Campus Recruitment Test Preparation (18 hrs)
- Introduction to General Skills (12 hrs)

All these initiatives of Finishing School have helped institution to enhance placement rates and provided more opportunities to the students, aspiring for higher education.

## 6. Center for Continuing Education

The Center for Continuing Education (CCE) organizes various types Courses for students, Support staff, and faculty. Following courses were conducted during the academic year 2017-18.

Sr. No.	Course Details	Duration	Participants
1.	Three days training on “Induction program for supporting staff.”	13 <sup>th</sup> TO 15 <sup>th</sup> Dec. 2017	Supporting staff member
2.	AICTE workshop under UKIERI phase -III	12 <sup>th</sup> TO 14 <sup>th</sup> Jan. 2018	Directors & principals of various colleges.
3.	Three days workshop on “Healthy working lifestyle”	8 <sup>th</sup> TO 10 <sup>th</sup> March 2018	Ladies supporting staff
4.	Induction program for supporting staff	20 <sup>th</sup> TO 22 <sup>nd</sup> March 2018	Supporting staff member
5.	Half day workshop on civil defence (अग्निसुरक्षा आणि प्रथमोपचार जनजागृती अभियान)	6 <sup>th</sup> April 2018	Faculty & supporting staff member
6.	Two days training on “Beginners guide to python”	14 <sup>th</sup> TO 15 <sup>th</sup> April 2018	Students
7.	Three days induction training for newly recruited faculties.	19 <sup>th</sup> TO 21 <sup>st</sup> June 2018	Teaching staff member
8.	One day workshop on “Planning engineering career”	22 <sup>nd</sup> June 2018	Engineering aspirants

## E. Facilities

1. **LIBRARY:** The fully computerized Central Library of SPCE is a treasure house of knowledge comprises ever growing collection of around 45,000 books; more than 9000 e-books (McGraw- Hill, Pearson, ProQuest, and Springer) and 3,500 bound volumes of journals both national and international subscribed by the college over the years. The library has good collection of CBT (Computer Based Tutorials) and video lectures from eminent personalities of various IITs and these are made available to our users on Intranet through on dedicated server. Library also has developed collection of Dissertations, submitted by post graduate students (M. Tech. & Ph.D.). These design oriented and case study thesis are kept for reference for the next generation in both forms, print and e-version. E-version of the same is made available through digital library. All these valuable resources are well organized in the 6000 Sq. Ft. area, where more than 150 users use this facility. The library has CCTV Cameras.

SPCE Library has set up Cyber Library with over 55 Pentium computers working in a networked environment through connectivity provided by Hathway and Syscon using 40 Mbps High Bandwidth Leased Line. The Online full text databases like, Springer, Science Direct, IEL, ASCE, ASME, J-Gate E-Journals and Pearson, McGraw-Hill, TMH, ProQuest, ASTM E-books Link, In addition, facilities like Web OPAC, NPTEL online lectures and digital library will also be accessible to the scholars.

The Library timings are 8:30 to 20:30 (Monday to Friday). A part of Library is open 24 x 7. Library details are available on institute website.

2. **HOSTEL:** SPCE hostel can accommodate 278 boys and 70 girls. The institute is in the process of constructing a new hostel building with an intake capacity of 400.

### 3. **IT INFRASTRUCTURE:**

In the era of digital revolution, advanced IT Infrastructure is a need of time for every academic institution. In view of this, institute has provided state of the art and well maintained IT Infrastructure to students and faculty members. This includes an advanced server with SAN storage, computer labs with efficient computing infrastructure on



different platforms, gigabyte LAN, Wi Fi facilities, all required and advanced legal system and application software's, CCTV surveillance facilities, biometric attendance system, etc. Due to this state of the art IT Infrastructure, institute campus is the technologically adept campus.

- a) **Website:** College has informative website **www.spce.ac.in**. Apart from statutory information, website also hosts useful academic resources for students, such as exam papers, scheme and syllabus, NPTEL Videos, academic schedule, exam schedule, etc.
- b) **Mail Server and Client:** The E-mail facility is managed through Google which provides us web based email client, built in chat facility, Google docs, Google apps, Google sites and few other facilities as well. Every faculty member is been given e-mail ID on spce.ac.in domain.
- c) **Internet:** The entire campus has been Wi-Fi enabled to provide mobility to the users in accessing various services available on institute's network. The Institute's network is linked to the Internet via a set of dedicated leased lines enabling round-the-clock Internet connectivity on the campus. Internet Service Provider (ISP) from whom the Institute has procured Internet bandwidth have installed fibre optics link from the campus to their hub. This ensures very high quality of bandwidth to the Internet. The Institute has 100 MBPS bandwidth to the Internet. This internet browsing centre is open to students during all working hours and even beyond office hours in order to have access to information available on internet as when required. A separate 50 MBPS line is available for hostel.
- d) **DSPACE (Digital Repository):** All-important administration documents are available and hosted in digital format on a server named as DSPACE. This is a digital repository of all documents. This server runs on open source software. The documents can be searched easily using a keyword. The documents and data segregation, department wise, community wise, etc. is supported. This facilitates centralized data storage accessible from institution intranet.
- e) **NPTEL Server:** The NPTEL Videos are hosted on a dedicated server to facilitate

learning.

- f) **Software Packages:** There is a wide variety of software packages available to the students and faculty for their academic and research work. These packages include several technical soft wares such as MATLAB, Simulink, CATIA, ANSYS, AutoCAD, MS Office Suite, Project Management, GIS etc. An environment of wide variety of operating systems such as Windows 7 Professional, Windows NT Server 4.0, Windows 2000 Server and LINUX has been established to make students familiar with latest operating systems.
- g) **Computing Equipment:** There are more than 300 High End personal computers connected over the campus LAN under some of the latest Network Operating Systems running on some of the latest Xeon based Rack Servers. A very high capacity Network Storage facility integrated with an automated data backup and recovery system caters to the data storage requirement of all the users. Every faculty member, every lab and almost every staff member is provided with a printer. There are sufficient numbers of LCD projectors and high quality scanners to facilitate teaching learning process. Every student and faculty member has a high end networked personal computer or laptop at his or her disposal.
- h) **LAN:** The institute also has gigabyte LAN with fiber optics backbone having more than 200 nodes connected onto it. All the computer laboratories are on this institute wide LAN. There are more than 15 high end manageable network switches which handle the internal data traffic. The computing facilities are available on different platforms, such as MS Windows and LINUX. The campus network is supported by 2 high speed servers with SAN Storage. This server also supports labs running Linux and open source software for providing the necessary services. These servers provide a core layer of services like Internet access, and file/print services, etc. for every workgroup (faculty, students, staff, etc.).
- i) **CCTV Surveillance:** Apropos to guidelines from Hon' Supreme Court of India and Hon' Mumbai High Court, institute has also implemented campus wide CCTV Surveillance system for safety and security of all the stakeholders and property. This CCTV

installation in our premises follows all the statutory guidelines to protect privacy of individuals. In case of any concerns regarding breach of individual's privacy, they can contact IT Infrastructure Management Committee. The video recording of the camera under concern is made available to the individual after approval from competent authority. In case of any untoward incident reported, the video recording is accessed, only to the authorized IT Person, with prior approval of competent authority

- j) **Biometric Attendance System:** The attendance of all faculty members and staff is maintained in a iris based biometric attendance system.

#### 4. COUNSELING CENTER

In today's fast changing scenario and competitive environment an individual can exist effectively only by continuous adaptation to change – personal, professional, and social. With this need to adapt comes a host of personality related problems: stress, frustration, anxiety, depression and burn out. If performance is to be kept constant or improved, an individual needs a support to evaluate, understand, explore and help in course of action. I strongly believe that a MENTOR is a facilitator who helps an individual to cope up with his/her situation in HERE and NOW, to HELP the individual to HELP themselves. Qualified with a Diploma in Psychological Counselling, training in CARCUFF MODEL in PERSONAL COUNSELLING from St. Xavier's Institute of Counselling, Recognition from Wockhardt–Harvard Medical School, HIV/AIDS Education and Research Foundation as a primary Care Giver (Counsellor). Dr. Ambrish Bhatt is available in the college on Mondays from 12 pm to 3 pm & Thursdays by appointment.

5. **MEDICAL AID:** College has made agreement with Lion Kartar Singh Hospital (6-B, Dada Road, Near Navrang Talkies, Opp. Parivar Building, Andheri(W), Mumbai – 400 058), for emergency medical attention and necessary treatment to student/staff of the college. There are several Multi-speciality hospitals within 2 to 5 km distance.
6. **INSURANCE:** All SPCE students (UG, P.G., and Doctoral) and staff members are covered under Personal Accidental Policy from “The Oriental Insurance Company Ltd.”

## F. Organisation

### 1. Board of Governors & Committees

SPCE has formed various Boards and Committees for good governance and smooth functioning. The Boards and Committees are formed as per guidelines of UGC/AICTE. Some of the committees are as per requirement for TEQIP program.

1. Board of Governors
2. Academic Board
3. Subject Board : Civil Engineering
4. Subject Board : Electrical Engineering
5. Subject Board : Mechanical Engineering
6. Purchase Committee
7. Finance Committee
8. Students Welfare Committee
9. Examination Committee
10. Building & Works Committee
11. Institution Development Committee
12. Industry Institute Interaction Cell
13. Research Committee
14. Library Committee
15. Information Committee
16. Alumni Committee
17. Disciplinary Committee
18. RTI Cell
19. Admission Committee
20. Hostel Committee
21. Women Development Cell
22. Anti-Ragging Committee
23. IQAC Cell
24. TEQIP-III Committee

Board of Governors

Sr. No.	Name of the Member	Qlfn. and position in the current engagements	Position	Nominated by
<b>Chairperson</b>				
1	Dr. Sessa Iyer	Ph.D. (Operation Management), FICWA	Chairperson	Trust
<b>Members of the Trust / Society / Management</b>				
2	Dr. Ranjan Banerjee	Ph.D. Dean SPJIMR	Member	Management
3	Dr. S. S. Mantha	Former AICTE Chairman	Member	Management
4	Prin. S. G. Chitale	M.Sc. Director (Colleges), Bharatiya Vidya Bhavan	Member	Management
5	Shri. Asif Mulla	M.A. LLM Partner Mulla & Associates	Member	Management
<b>Educationists or Industrialists</b>				
6	Dr. Shivaji Rao Kadam	Vice-Chancellor, Bharati Vidyapeeth University	Member	UGC
7	Dr. Kiran Patil	Ph.D. Deputy Secretary, HTE., Maharashtra	Member	State Govt.
8	Dr. M. C. Deo	Ph.D. Professor, Civil Engg. Dept IIT-Bombay	Member	Management
9	Dr. B. N. Choudhary	Ph. D. Dy. Director College of Engineering, Pune	Member	AICTE
10	Shri. Dinesh Deshpande	Executive Director, HPCL, Mumbai	Member	University
11	Shri. Sanjeev C Nadkarni	Director Engineering Services, Aker Solutions	Member	Management
12	Smt. Seema Ghanekar	B.E., Asso. VP, Telecom & Hi- Tech, L & T Tech Services	Member	Management
13	Dr. (Smt.) Prachi Gharpure	Ph.D. Principal SPIT	Member	Management
<b>Faculty members of the Institution</b>				
14	Dr. R. B. Buktar	Ph.D. Professor, Mechanical Engg. Dept. SPCE	Member	Management
15	Dr. Nilesh Raykar	Ph.D. Professor, Mechanical Engg. Dept. SPCE	Member	Management
<b>Head of the Institution, Ex-officio</b>				
16	Dr. P. H. Sawant	Ph.D. Principal, SPCE	Member- Secretary	Ex-Officio

## 2. Human Resources

### 1. Faculty & Support Staff

- **Civil Engineering Department: Faculty and Staff**



Dr. M. M. Murudi



Dr. P. P. Nagrale



Dr. A. A. Bage



Dr. A. R. Kambekar



Dr. P. G. Gaikwad



Dr. Hansa Jeswani



Prof. Reshma Raskar



Prof. A. N. Ghadge



Prof. K.A. Nadgouda



Prof. S. J. Kumbhar



Ms. Akshata  
Desphande



Ms. Pradnya  
Sambary



Mr. Ajinkya E  
Magdum



Shri Naresh Mayekar



Shri Prakash Pujari



Shri Nagin Solanki



Shri Popat Bhangre

• **Electrical Engineering Department: Faculty and Staff**



Dr. Anupa Sabnis



Smt. Remadevi C.



Dr. B. B. Pimple



Smt. V. P. Joshi



Dr. Rahul T.  
Dahatonde



Dr. Sangeeta  
Daingade



Dr. Nandkishor W.  
Kinhekar



Prof. N. G. Bhitre



Dr Swati A. Lavand



Mrs. Ushma Shah



Mrs. Prajakta Joshi



Ms. Sumbul Abidi



Prof. Matilda J.



Mr. Vishal Dake



Mr. Rahul Chavhan



Ms. Hemlata Rao



Ms. Megha Fernandes



Mrs. S. S. More



Mr. P. R. Ambekar



Mr. R. R. Govalkar



Mr. S. V. Shelar



Mr. S. P. Pawar



Mr. S. I. Naik



Mr. N. P. Pujari



Mr. V. Y. Tambvekar



Mr. T. Diwan



Mr. I. Saudagar

- **Mechanical Engineering Department:** Faculty and Staff





Dr. Nilesh Raykar



Dr. R. B. Buktar



Prof. D. N. Jadhav



Dr. Kiran Bhole



Dr. R. S. Maurya



Dr. S. B. Rane



Dr. Sudhakar Umale



Prof. Parag Muley



Mrs. Megha S.  
Nagrale



Shri Sachin Vankar



Shri Kunal Bhavsar



Dr. Balwant N.  
Bhasme



Mr. Sharad Valvi



Mr. Haseen Shaikh



Shri Shrikant Baste



Mr. Akash S. Bidwaik



Mr. Rohit Desphande



Mr. Luis Dias



Mr. Rajesh Keny



Mr. S. M. Shetkar



Mr. Pravin Lohar



Mr. Vasant Kumar



Mr. Anil Kale



Mr. Pravin Raje



Mr. K. L. Shinde



Mr. Nilesh Kelkar



Mr. S. B. Kolpate



Mr. Deepak Parab



Mr. Mahendra Rane



Mr. Maruti Bhangare



Mr. Aarif Kazi



Mr. Jafar Patel



Mr. Nitin Kamble

- **First Year Faculty:**



Dr. Shyamlee Solanki



Shri Satish Barot



Shri Vinod Sharma



Smt. Divya T.A.



Dr. Jayram Gholave

- **Administrative Office:** The administrative office is headed by Shri B. S. Nagtode, Registrar. There are 30 office staff working with the institute.



Shri B S Nagtode



Shri R. B. Solanki



Shri S. P. Khot



Shri A. B. Jagtap



Shri S. R. Vinekar



Shri K.M. Joshi



Shri Sandip S.  
Talekar



Smt. Neelam Vaity



Shri Mahesh Gound



Shri Maruti S. Murkar



Smt. Vandana Rajput



Smt. Sarvasvi  
Patnoskar



Smt. Samidha  
Walavalkar



Shri Dinesh Torane



Smt Anushka Jadhav



Smt. Shanti Shekar



Shri Ekram Balihar



Shri Sunil Ghanekar



Shri Prakash Bachhav



Shri Prakash Crasto



Shri Yusuf Khan



Shri Navneet Waghela



Shri Bhupendra  
Solanki



Shri D. M. Waghela



Shri Bharat M Solanki



Smt. Devilaben  
Solanki



Smt. Neeru Waghela



Shri Koushik  
Valendra



Shri Shailesh  
Sarawade






Shri Prakash S  
Noughare

### 3. Students Council

The year begins with formation of Students' Council in the month of August. The Council enthusiastically celebrates/organises various programmes such as Independence Day; the first of many responsibilities to come. The next event is PRARAMBH on September, to welcome our dearest Freshers. Annual Debate Competition, The Cultural evening, Garba nite are October events. Come January and with great responsibility and enthusiasm, with the celebration of Republic Day and the SPECTRA, War of Imagination, a three day festival to dig out the technical talents of the college, was welcomed with excitement. The annual sports festival SPIRIT made its way into the hearts of hundreds of SPCEians during February.

The month of March makes its way to SPCE's most awaited annual cultural extravaganza "SPACE" and "International Women's Day" on 8th March 2017. Social week will be held to maintain excitement even towards the closure of the year. And to bid adieu to our beloved final year students, farewell for B.Tech students was held as April came to a close.

			
Ms Rashi Sharma General Secretary	Mr Tushar Singh Cultural Secretary	Mr Suparno Ghosh Cultural Secretary	Mr Abhishek Deshmukh Technical Secretary
			
Mr Amit Chitanvis Technical Secretary	Mr Prathamesh Sawant, Technical Secretary	Mr Roharsh Bhadane Finance Secretary	Ms Shreya Burlikar Finance Secretary

			
Mr Tsuzo Iohé Sports Secretary	Mr Arbaz Naikwadi Sports Secretary	Ms Anushree Ghurka Sports Secretary	Mr Sourish Gavali Magazine Secretary
			
Ms Ashwini Bidwai Magazine Secretary	Mr Bibin Lukose Literary Secretary	Ms Neha Hunge Ladies Representative	Ms Mitalee Chaudhari Ladies Representative
			
Mr Sarang Chaudhar Official Photographer, Creatives			

## G. TEQIP Program

<b>1. TEQIP – II Project</b>
<ul style="list-style-type: none"><li>• SPCE Successfully completed TEQIP-II project. Total Funds received = 10.00 + 2.00 + 0.56 = 12.56 Crore. All compliances such as Performance audit, Mentors report and financial audits are complied with.</li></ul>
<b>2. TEQIP – III Project</b>
<p><b>Project Cycles :</b></p> <ul style="list-style-type: none"><li>• Cycle 1 : Mentor institutes – 60 Nos, Mentee Institutes – 60 Nos</li><li>• Cycle 2 : Mentor institutes – 60 Nos, Mentee Institutes – 60 Nos (After Oct'18)</li></ul> <p><b>Project Objectives :</b></p> <ul style="list-style-type: none"><li>• Focused states : Institutes (component 1.1) – to improve quality and equity</li><li>• ATUs : Universities (component 1.3) – to improve governance and performance</li><li>• Twinning Arrangement : Universities and Institutes (component 1.3) – to build capacity and improve performance</li></ul> <p><b>Project Funding :</b></p> <ul style="list-style-type: none"><li>• 100 % funding by MHRD ( 7 Cr to 15 Cr) Three main Components: Procurement &amp; Civil Works (45 %), Teaching Learning Process (45%) and IOC (10%)</li><li>• Four funds 8 % of IRG</li><li>• Project lays major emphasis on M &amp; E (Responsibility with BOG and Head of Institution)</li><li>• Mandatory incorporation of AICTE points in the action plan of Institutes<ul style="list-style-type: none"><li>✓ Induction Program</li><li>✓ Start-up</li><li>✓ Curriculum revision</li><li>✓ Industry readiness</li><li>✓ SWAYAM (Credit Transfer, All faculty to register etc...)</li><li>✓ SWAYAM-Prabha (Digital learning)</li><li>✓ Mandatory Internship</li><li>✓ Mandatory Accreditation</li></ul></li></ul>



- New features
  - ✓ Student Learning Assessment (SLA)
  - ✓ Disbursement Linked Indicators (DLIs)

### **3. Features of TEQIP – III Project**

- **Key areas of Concerns :** Employability, Research and Equity
- **Emerging Areas**
  1. Health Care Technology
  2. Energy Security
  3. Rural Urban Housing Design
  4. Nanotechnology
  5. Water / River System
  6. Advanced Materials
  7. Computer Science and ICT
  8. Manufacturing Technology
  9. Advanced Security and
  10. Climate Change
- **Incorporation of following Skills in curriculum / Induction program**
  1. Technical Skills
  2. Communication skills
  3. Team working skills
  4. Leadership skills
  5. Managerial skills
  6. Entrepreneurial skills
- **Plans**
  1. Action Plan
  2. Financial Plan
  3. Procurement Plan
  4. EAP Plan

#### **4. Preparedness**

- Strategic plan for 2017-2022 ready, Action plan and implementation in progress
- Improving Student learning, employability, research competence and professionalism
- Increasing faculty competence, productivity and motivation
- TEQIP-III : Procurement, Financial, Action and EAP plan is ready
- AICTE mandatory points included in action plan
- Curriculum revised as per AICTE, UGC guidelines, Course committees and Credit Transfer in existence since 2015
- SPCE Online and Digital learning, Remedial Coaching, Coaching for GATE and Competitive examinations in place
- Activities for development of Student, Staff and Stake holders
- Improved infrastructure

#### **5. Progress of SPCE in TEQIP-III Project:**

- PFMS registration done in August 2017. Unique code : MHMC00003768
- Digital Signature: The institute has obtained following two digital signatures of class 2 with e-mudra agency in September 2017. (1) Dr. P. H. Sawant, Principal SPCE. (2) Dr Rahul Dahatonde, TEQIP-III Coordinator.
- Procurement Plan Approved (First release of INR 2.00 Crore)
- Twinning arrangement with Mentee institute
  - a) The MOU with Rewa Engineering College, Rewa has been signed on July 21, 2017 at NPIU, New Delhi
  - b) Helped in preparing Action Plan for TEQIP-III  
The first meeting with Rewa Engineering College, Rewa had been conducted on August 12, 2017 at Rewa Engineering College, Rewa. During this meeting the following issues were discussed: Academic Autonomy, NBA accreditation and Possible joint activities - Planned to conduct Industry meet at Jabalpur.
  - c) FDP conducted at SPCE during 29<sup>th</sup> October to 2<sup>nd</sup> November 2018
- MOU with state: The institute received the MOU draft between state and institute. The draft has been signed by The Honourable Chairman, BOG for institute and submitted to Directorate Office

for further process.

- Performance Audit Complete (Score – 1.51 out of 3, on 1 to 3 scale, 1 being better), SPCE stands 19<sup>th</sup> out of 63 amongst TEQIP-III institutes
- Mentor Report, Performance Audit report, Financial Audit Report sent to NPIU

### TEQIP-III Expenditure Summary

Particulars	1-Oct-2017 to 31-Mar- 2018	1-Apr-2018 to 31-Oct- 2018	1-Apr-2018 to 31-Oct-2018	Oct,17 to Oct. 18
	Expenses, Rs	Expenses, Rs	Expenses, Rs (Billed)	Expenses, Rs
<b>Procurement - 1.3.1</b>				
<i>Equipment - 1.3.1.1</i>	0.00	50,24,996.00	0.00	50,24,996.00
<i>Furniture - 1.3.1.3</i>	0.00	1,55,618.00	0.00	1,55,618.00
<i>Learning Resources- 1.3.1.2</i>	0.00	19,88,015.00	0.00	19,88,015.00
<b>Academic Processes - 1.3.2</b>				
<i>Faculty/Staff Development and Motivation-1.3.2.4</i>	5,18,819.00	7,10,612.00	80,935.00	13,10,366.00
<i>Graduates Employability - 1.3.2.3</i>	3,594.00	4,57,464.00	97,000.00	5,58,058.00
<i>Improve Students Learning - 1.3.2.1</i>	4,68,208.00	2,27,743.00	3,79,579.00	10,75,530.00
<i>Industry-Institute Interaction - 1.3.2.11</i>	1,41,146.00	2,74,680.00	6,064.00	4,21,890.00
<i>Management Capacity Development-1.3.2.9</i>	4,78,660.00	0.00	46,318.00	5,24,978.00
<i>Mentoring/Twinning System - 1.3.2.7</i>	4,02,928.00	0.00	0.00	4,02,928.00
<i>Reforms and Governance - 1.3.2.8</i>	3,17,726.00	2,46,647.00	99,636.00	6,64,009.00
<i>Research and Development - 1.3.2.5</i>	3,30,453.00	1,65,046.00	59,182.00	5,54,681.00
<i>MOOCs and Digital Learning - 1.3.2.6</i>	0.00	0.00	13,690.00	13,690.00
<b>Operating Cost - 1.3.3</b>				
<i>Consumables - 1.3.3.1</i>	7,000.00	0.00	0.00	7,000.00
<i>Meetings - 1.3.3.4</i>	1,56,868.00	2,43,459.00	484.00	4,00,811.00
<i>Office Expenses - 1.3.3.3</i>	6,443.00	16,072.00	51,427.00	73,942.00
<i>Salary - 1.3.3.7</i>	4,11,032.00	4,74,446.00	1,34,107.00	10,19,585.00
<i>Travel Cost - 1.3.3.6</i>	29,142.00	0.00	0.00	29,142.00
<b>Grand Total</b>	<b>32,72,019.00</b>	<b>99,84,798.00</b>	<b>9,68,422.00</b>	<b>1,42,25,239.00</b>

## H. Infrastructure Development

**Summary of Civil work carried out under Institute fund from 01<sup>st</sup> April 2018 to 12<sup>th</sup> November 2018**

**Note:** It is proposed to construct a hostel admeasuring 70,000 Sq. Ft area in phased manner.

<b>Sr. No.</b>	<b>Name of the Work</b>	<b>Name of the Contractor</b>	<b>Date</b>	<b>Amount</b>
1	Electrical work at library	Ganesh Electrical	01/09/2018	18,503.00
2	False ceiling work at library	Sangam interior	29/08/2018	99,914.00
3	Renovation of Room No. 119		07/04/2018 to 21/06/2018	8,82,963.00
4	Internal and External painting of Institute building (in Progress)	Dhiraj Enterprises	13/03/2018	33,81,562.00
5	Repair and strengthening work of Institute building	Rashi Enterprises	10/10/2018	7,70,613.00
6	Removing false ceiling of PG classrooms	Hayatulla Enterprises	17/09/2018	25,173.00
7	Providing vertical false ceiling Room No. 249 & 252	Hayatulla Enterprises	27/09/2018	22,284.00
			Total	<b>52,01,012.00</b>
<b>Civil works carried out under TEQIP fund from 01<sup>st</sup> April 2018 to 12<sup>th</sup> November 2018</b>				
1	Internal Painting Work (in Progress)	Sankalp Structure	04/07/2018	6,93,000.00
2	Renovation of ladies toilet blocks ( Work is in Progress)	Rashi Enterprises	26/07/2018	9,33,390.00
3	Renovation of gents toilet blocks ( Work is in Progress)	Dhiraj Enterprises	26/07/2018	14,33,643.00
			Total	<b>30,60,033.00</b>
<b>Civil work carried out under Hostel fund from 01<sup>st</sup> April 2018 to 12<sup>th</sup> November 2018</b>				
1	Internal and External painting of Hostel building (in Progress)	KP Enterprises	13/03/2018	24,84,316.00
2	Repair and strengthening work of Hostel building	Rashi Enterprises	01/10/2018	10,65,489.00
3.	Material for aluminium ducting wiring work	Manoj H/w & Electrical	13/02/2018	3,48,241.00
4	Electrical work & aluminium ducting labor charges	Ganesh Electrical	18/06/2018	89,417.00
5	Providing Electrical Main Panel board	Pratik Fabricator	20/04/2018	1,20,360.00
6	Fixing and installation of panel board (labor charges)	Ganesh Electrical	18/06/2018	50,000.00
			Total	<b>41,57,823.00</b>

**Dr. Prashant P. Nagrale, Chairman B & W**

## I. Best Practices

1. Strategic plan for the institute is ready
2. All the compliances are done from time to time.
3. Institute has academic calendar and calendar of every section like, examination, TPO, library, etc. are in sync with institute academic calendar. The dates are meticulously followed.
4. As a part of Finishing School of TEQIP, a initiative ‘SP Learning Initiative for Career Enhancement’ (SPLICE) conducted by Training & Placement office under which alumni interaction and mock placement drives are conducted with the help of Alumni of the institution.
5. There are slots for value added courses, industry visits, guest lectures, remedial classes in the regular class timetable. There are value added courses introduced in the curriculum in line with Industry 4.0.
6. Senior faculty members from IIT are associated with every department as Research Advisor.
7. Students are encouraged to undertake innovative projects with latest technologies such as Internet of Things, Artificial Intelligence, etc. Many courses such as Digital Circuits, Digital Electronics, Microprocessors, Finite Element Methods etc. have mini projects associated with them. Students are also encouraged to take up projects that are useful to society. There is an active participation in Unnat Bharat Abhiyan. Availability of male and female counselor is adequate at the institute to help students.
8. Institute has strong partnership with industry with the help of bodies such as Board of Apprenticeship Training. Industry members present in subject boards, academic board, and BoG. Elective courses such as Industrial Automation are designed and conducted by the Industry professionals.
9. Innovative teaching learning through augmented reality to teach course Engineering Graphics to F. Y. B. Tech. students.
10. Peer to peer learning is promoted with hands-on workshops for junior students with the help of senior students on topics such as python programming, android app development, etc.

11. 3D printing facility with cementitious material available in the institute. 3D printer for plastic material fabricated in the institute and supplied to Institute of Chemical Technology (ICT), Matunga.
12. Up to date Learning resources as recommended by the AICTE are available and 24 x 7 reading room for students with Wi-fi connectivity is available in library.