
Bharatiya Vidya Bhavan's
SARDAR PATEL COLLEGE OF ENGINEERING
MUNSHI NAGAR, ANDHERI (WEST), MUMBAI-400 058.
ANNUAL REPORT
ACADEMIC YEAR 2014-15
BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL COLLEGE OF ENGINEE
CIVIL ENGINEERING DEPARTMENT
Sardar Patel College of Engineering
Munshi Nagar, Andheri (West),
Mumbai 400058.

CIVIL ENGINEERING DEPARTMENT

Patron
Prof. (Dr.) P. H. Sawant
Principal

Editor
Prof. (Dr.) P.P.Nagrale

Advisors
Dr. A.R.Kambekar
Dr. P.G.Gaikwad
Dr. H.S.Jeswani
Prof. A.N.Ghadge
Prof. R.R.Raskar
Prof. K.A.Nadgouda

Report Highlights

- ***Academic Programmes***
- ***Research and Laboratories***
- ***TEQIP activities***
- ***Industry-Institute Interaction***
- ***Student Activities***

Civil Engineering Department,
Sardar Patel College of Engineering,
Bhavan's Campus, Munshi Nagar,
Andheri West, Mumbai 400058
Ph: +91-22-26232192
Fax: +91-22-26237819

Dr.P.H.Sawant
Principal

Dr. M.M.MURUDI
Vice Principal

DR.P.P.Nagrale
H.O.D. (Civil)

1.0 Message from Head of 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. It is traditionally broken into several sub-sections including environmental engineering, geotechnical engineering, structural engineering, transportation engineering, water resources 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 with an intake capacity of 45. About 30 number of student are pursuing Doctoral program.

In addition, the department is selected as a QIP Center by the AICTE. Under this scheme department can register two full time research scholar per year and AICTE will provide full financial assistantship for three years. Also, department can conduct number of short term courses in the area of civil engineering and complete financial assistantship will be provided by AICTE.

Dr. Prashant P. Nagrale
Head of Civil Engineering Department

2.0 Vision and Mission of Department

Vision

- To build a reputed department that will produce competent, committed and socially responsible civil engineering 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.

3.0 Programme Educational Objectives (PEO's)

B.Tech (Civil)

- Have a successful career in Civil Engineering and allied fields.
- Pursue higher education and research.
- Possess the competency to investigate, analyze and provide solutions to civil engineering problems.
- Practice their profession with ethics and be socially responsible.

M.Tech (Construction Management)

- Have a successful career in Civil Engineering profession.
- Pursue higher education and research with specific focus on management skills.
- Possess the competency to investigate, analyse and provide solutions to professional Civil Engineering field problems.
- Practice their profession with ethics and social considerations.

M.Tech (Structural Engineering)

- Have a successful career in Structural Engineering and allied fields.
- Pursue higher education and research.
- Possess the competency to investigate, analyse and provide solutions to Structural engineering problems.
- Practice their profession with ethics and be socially responsible.

4.0 Programme Outcomes (PO's)

4.1 B.Tech (Civil)

- Apply knowledge of science, mathematics and engineering.
- Conduct experimental investigation and interpret the results.
- Design Civil Engineering system with realistic constraints keeping focus on socio-economic benefits.
- Work effectively as an individual as well as team member.
- Identify, investigate, analyze and formulate safe design for Civil Engineering problems.
- Practice profession with ethic and responsibility.
- Communicate effectively in work environment.
- Recognize the need for lifelong learning to assimilate technological advances.
- Contribute to the solution of contemporary issues for sustainable development.
- Use equipments, techniques, modern engineering tools and software necessary for engineering practice.

4.2 M.Tech (Construction Management)

- An ability to apply knowledge of Construction Management, analysis tools and techniques in the field of Civil Engineering.
- An ability to design, analyse and interpret data for research work.
- An ability to plan and design system components or process to meet desired needs within realistic constrain such as economic, environmental, social, political, ethical, health and safety, production and sustainability.
- An ability to function in the multidisciplinary team at multilevel.
- An ability to identify, formulates, and solve construction project management issues and engineering problems.
- Understanding professional and ethical responsibility.
- Ability to communicate effectively with field staff, project experts.
- Broad education necessary to understand impact of engineering solutions in a global, economic, environmental societal context.
- Recognition of need for and ability to engage lifelong learning.
- Knowledge of contemporary issues.
- An ability to use the research skills modern engineering and management tools for construction project management.

4.3 M.Tech (Structural Engineering)

- Apply knowledge of science, mathematics and engineering.
- Conduct experimental investigation and interpret the results.
- Design Structural/Civil/allied Engineering systems with realistic constraints keeping focus on socio-economic benefits.
- Work effectively as an individual as well as team member.
- Identify, investigate, analyze and formulate safe design for Structural Engineering problems.
- Practice profession with ethics and responsibility.
- Communicate effectively in work environment.
- Recognize the need for lifelong learning to assimilate technological advances.
- Contribute to the solution of contemporary issues for sustainable development.
- Use equipments, techniques, modern engineering tools and software necessary for engineering practice.

5.0 Overview of Academic Programmes

Sr. No.	Academic Programme	Specialization	Duration of Course	Intake
Undergraduate				
1.	Bachelor in Technology (B.Tech)	Civil Engineering	04	60
Post Graduate				
1	Master in Technology (M.Tech)	Construction Management	02	18
2	Master in Technology (M.Tech)	Structural Engineering	02	18
3	Doctor of Philosophy (Ph.D)	Civil Engineering	NA	45

6.0 Faculty and Staff

6.1 Teaching Staff

	**Dr. P.P.Nagrale** Professor & HOD Civil Engineering 18 Years of Experience Area of Specialization: Transportation Engineering, Pavement Design Email : p_nagrale@spce.ac.in		**Dr.A.R.Kambekar** Associate Professor, 19 Years of Experience Area of Specialization: Offshore Engineering Email:a_kambekar@spce.ac.in
	**Dr. P.G.Gaikwad** Associate Professor 18 Years of Experience Area of Specialization: Construction Management Email : pggiitr@gmail.com		**Dr. H.S.Jeswani** Assistant Professor 12 Years of Experience Area of Specialization: Environmental Engineering Email : j_hansa@spce.ac.in
	**Mrs. R.R.Raskar-Phule** Assistant Professor 12 Years of Experience Area of Specialization: Remote Sensing, GIS/GPS Email : r_raskar@spce.ac.in		**Mr.A.N.Ghadge** Assistant Professor 17 Years of Experience Area of Specialization: Environmental Engineering Email : ghadgean@gmail.com
	**Mrs. K.A.Nadgouda** Assistant Professor 12 Years of Experience Area of Specialization: Geotechnical Engineering Email : Knadgouda@spce.ac.in,		**Mr.S.J.Kumbhar** Assistant Professor 1 Years of Experience Area of Specialization: Environmental Engineering Email : snehjitkumbhar@gmail.com
	**Miss. P.D.Singh** Assistant Professor 3 Years of Experience Area of Specialization: Transportation Engineering Email : singh.priti69@gmail.com		**Mrs. B.H.Jadhav** Lecturer 4 Years of Experience Email : bhawana100686@gmail.com

	**Miss. Plancy Pereria** Assistant Professor Area of Specialization: Geology Email : plancy.pereira@gmail.com		**Mr.Pritesh Bhana** Assistant Professor Civil Engineering Department Area of Specilaization: Transportation Engineering Email : shammy091992@gmail.com

6.2 Non- Teaching Staff

	Mr. Prakash Pujari Curetor		Mr.Aba Shelke Lab Attendant
	Mr. G.S.Doke Lab Attendant		Mr.S.A.Pujari Lab Attendant
	Mr.Navin Solanki Lab Attendant		Mr. Popat Bhangare Hamal
	Mr. Naresh Mayekar Hamal		Ms. Pushpa Chauhan

7.0 Laboratories

Civil engineering department consists of 7 laboratories namely Fluid Mechanics and Applied Hydraulics Laboratory, Computer Laboratory, Geology Laboratory, Geotechnical Engineering Laboratory, Environmental Engineering laboratory, Survey Laboratory and Transportation Laboratory.

Lab. Incharge : Dr.A.R.Kambekar
Lab. Attendant : 1) Mr. A. Shelke
2) Mr. Navin Solanki
Lab. Room No: 015
Lab. Area: 278.343sqft

1) Fluid Mechanics and Applied Hydraulics Laboratory

Hydraulic engineering as a sub-discipline of civil engineering is concerned with the flow and conveyance of fluids, principally water and sewage. One feature of these systems is the extensive use of gravity as the motive force to cause the movement of the fluids. This area of civil engineering is intimately related to the design of bridges, dam, channel, levees and areas of water supply and sanitary engineering The main objective of the fluid mechanics and applied hydraulics lab is to make a civil engineering UG to be aware and solve the principles of fluid mechanics and then apply it to problems dealing with the collection, storage, control, transport, regulation, measurement, and use of water.

Facilities:

The various facilities available in fluid mechanics lab are wind tunnel, flow through pipe set up, Rectangular notch, V notch, Laminar flow set up; metacentric height shift model; pipe surge and water hammer set up; two stage centrifugal pump set up, Bernoulli's theorem setup; Reynold's apparatus; series and parallel pump test rig, pipe friction set up; Impact of jet; Pelton turbine; Francis turbine; Kaplan turbine

Lab. Incharge : Dr.H.S.Jeswani
Lab. Attendant : Mr. G.S.Doke
Lab. Room No: 256
Lab. Area: 26.11sqft

2) Environmental Engineering Laboratory

The primary objective of this lab is to demonstrate environmental engineering testing procedures for the subjects of Environmental Engineering I and II and for the electives such as solid waste management and Industrial waste water treatment. This lab is continuously upgraded with the latest environmental equipments. It covers the four major pollution areas: air, wastewater and water and solid waste management. Students contribute through various undergraduate and postgraduate projects in the lab.

Facilities:

Various equipment to measure air, water, soil and wastewater quality and analysis are available in the laboratory. Some of them are atomic absorption spectrophotometer, UV-Visible spectrophotometer, COD apparatus, DI Unit, autoclave, turbidimeter, muffle furnace, oven, personal samplers, High Volume Sampler, Jar Test Apparatus, DO Probe, pH Meter and noise level meter.

Lab. Incharge : Dr.P.P.Nagrale
Lab. Attendant : 1) Mr. Prakash Pujari
2) Mr. Popat Bhangare
Lab. Room No: 013
Lab. Area: 86.65sqft

3) Transportation Engineering Laboratory

Transportation engineering, as practiced by civil engineers, primarily involves planning, design, construction, maintenance, and operation of transportation facilities. The facilities support air, highway, railroad, pipeline, water, and even space transportation. The design aspects of transport engineering include the sizing of transportation facilities (how many lanes or how much capacity the facility has), determining the materials and thickness used in pavement designing the geometry (vertical and horizontal alignment) of the roadway (or track).

Facilities:

All major equipment related with highway material testing is available in this laboratory. Some of the essential equipment for highway material testing available in this laboratory are aggregate Impact testing machine, Los Angeles Abrasion machine, Ductility machine, Ring and Ball apparatus, penetrometer, marshall stability apparatus, Bitumen Stripping apparatus, Bitumen heating apparatus, triaxial testing machine, lab, CBR apparatus and many software such as TRANSCAD, ANSYS,HDM-4, ANSYS, CUBEVOYGER, MXROAD, are available in the lab

Lab. Incharge: Prof.A.N.Ghadge
Lab. Attendant: 1) Mr. Prakash Pujari
2) Mr. Popat Bhangare
Lab. Room No: 118
Lab. Area: 68.62sqft

4) Surveying Laboratory

Surveying is the technique and science of accurately finding out the position of points and the distances and angles between them. The tools used by surveyors have evolved tremendously. Engineering, especially civil engineering, depends heavily on surveyors. Whenever there are roads, railways, reservoir, dams, pipeline transports retaining walls, bridges or residential areas to be built, surveyors are involved. They establish the boundaries of legal descriptions and the boundaries of various lines of political divisions. They also provide advice and data for geographical information systems (GIS), computer databases that contain data on land features and boundaries. In addition, they must be able to use delicate instruments with accuracy and precision. With respect to above importance of surveying in construction field, our survey lab is kept well equipped with latest instruments. This particular instrument can be used for conducting survey project of road, railway, bridges or buildings.

Facilities:

Various equipments used in surveying such as dumpy level, theodolite, total station , auto level are available in the laboratory to perform experiments such as theodolite traversing, Profile levelling & cross-section levelling , alignment, block contouring and tacheometric surveying.

Lab. Incharge : Prof.K.A.Nadgouda
Lab. Attendant : 1) Mr. Shankar Pujari
2) Mr. Naresh Mayekar
Lab. Room No: 54
Lab. Area : 115.06sqft

5) Geotechnical Engineering Laboratory

Geotechnical engineering is an area of civil engineering concerned with the rock and soil that civil engineering systems are supported by Knowledge from the fields of geology, material science and testing, mechanics, and hydraulics are applied by geotechnical engineers to safely and economically design foundations, retaining walls, and similar structures. Geotechnical engineering Laboratory is one of the pioneer laboratories in Maharashtra for all Geo-technical testing and consultancy works. Various works related to Geo-technical and foundation investigations are carried out in this laboratory. This laboratory can be very useful for experiments related to soil for pavement subgrade, subbase etc. Following are the major equipment available in this laboratory.

Facilities:

Various equipments such as Triaxial Test Equipment, Load Actuator, Consolidation test set up , Rock Cutting Machine are available in the laboratory.

Lab. Incharge : Prof.Plancy Pareria
Lab. Attendant : 1) Mr. Naresh Mayekar
Lab. Room No: 117
Lab. Area: 69.02sqft

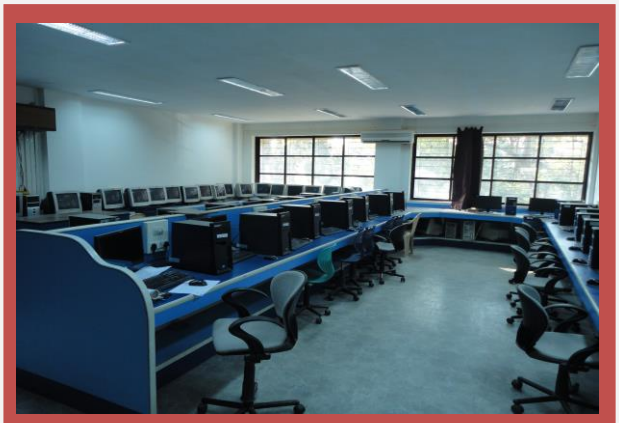
5) Geology Laboratory

Technical perfection alone cannot ensure the economy, success or safety of civil engineering constructions. To achieve this engineers have to assess the suitability of sites on which the entire structure is resting upon. This crucial role is fulfilled by the techniques of "Engineering Geology" which refers to the application of geological knowledge to civil engineering constructions, at different stages by taking suitable precautionary measures to overcome drawback and take advantage of site geology findings. In this short course student is exposed to relevance and logical application of geological studies to engineering field.

In engineering geology laboratory students are given introduction to types of rocks and minerals, their physical and to some extent engineering properties. Study of maps to derive and understand geological cross section along with different structures present within them is an important aspect. Combined knowledge of rocks and cross section description allows students to get idea about suitability and drawbacks of a particular site.

Facilities

Students study rocks such as granite, basalt, sandstones, limestones, gneisses which are very common foundation rocks. Minerals present and these rocks are studied under petrological microscope. Geological maps are studied to make a multiple cross section identifying strata and structures. Soil Resistivity Meter is useful for the determination of groundwater levels at any particular site.



Lab. Incharge : Prof.Reshma Raskar
Lab. Attendant : 1) Mr. Prakash Pujari
Lab. Room No: 120
Lab. Area : 67.43sqft

5) Computer Laboratory

A computer lab is provided for UG and PG students to browse through various papers and complete their projects or write research papers.

Common computing facility is required in each department for the betterment of students who can't access internet at home. This facility can be used to download research papers from e journals to which the institute has subscribed. It can even be used to research related to projects. Licensed MS Project, Arc-GIS, Sewer-GEMS, Water-GEMS, MATLAB, ANSYS, MXROAD and Storm-GEMS are installed on few of the computers. A total of 40 computers equipped with licensed MS office 2010 and Windows 2010 are available in this facility.

Facilities:

40 computers with preloaded licenced MS Office 2010, Windows 2010. 6 computers with licensed version of SewerGEMS, WaterGEMS and Storm Water GEMS. 10 computers with licensed version of MS Project and three computers with licensed ArcGIS software

8.0 Industry Institute Interaction

8.1 MoUs with Industries & Academia

Civil Engineering Department has collaboration with various colleges & companies for students training, joint research & other activities. In academeic year 2014-15, department signed Memorandum of Understanding (MoUs) with following companies & Academic institutes,

Sr. No.	Name of Collaborator	MOU Collaboration Areas	Date of Signed	Duration Of MOU
1	Environmental Policy and Research, India	Training sessions and corporate training programmes in the area of environmental science and engineering for government/non-government organizations to be held in collaboration	27/02/2015	Feb,2020
2	Walchand College of Engineering, Sangli	For Networking & Collaboration to improve Academic, Research & Allied activities	11/12/2014	Dec,2016

MoU Signed with EPRI on 27 Feb, 2015

8.2 Expert Lectures

One of the important Programme educational objectives of the Civil Engineering Department is to possess the competency to investigate, analyze and provide solutions to civil engineering problems. And for achieving this objective, department gives more emphasis on real life corporate projects where students get knowledge & scope for their analytical & research ability with their academic course. Department inviting a people from Industry (such as L & T), Top Institutes (such as IITs & IIMs) & Government sector like BMC, PWD etc. These personalities deliver their valuable information, experiences, practices & latest technologies available in market. They enhanced students with knowledge about industry need, latest technical updates, research scope etc.Civil Engineering Department conducted 9 Guest lectures with support of Industrialist & Academic experts during year 2014-15 under TEQIP.

Sr. No.	Name of speaker\ Organization	Topic	Date	Students
1	Mr. Gaurav R.Rai (AIR 02)	How to prepare for GATE & UPSC ENGINEERING SERVICES Examinations.	July 14	60
2	Mr. Gaurav R.Rai	How to prepare for GATE & UPSC ENGINEERING SERVICES Examinations.	July 14	36
3	Divya Choudhary	“Career counseling of SPCE students for admission in CBS University USA”	July 14	23
4	Ms.Katrina Velkova	“ Study Abroad”	July 14	23
5	Mr.P.L. Bhongirwar	Durable Assets for rural roads	Aug 14	45
6	CADD Center	Emerging World on 3D Printing helping Additive Manufacturing	March 15	30
7	Mr. Advait Aundhkar	Smart Cities	Oct 14	50
8	Prof. Devyani Joshi	Recycling Technologies	March 15	30
9	Mr. Shailesh Kadrekar.	Repairs and Rehabilitation of Old Building	Oct 14	40

8.3 Industrial Visits

Industrial visits represent important activities in any engineering undergraduate programme that contribute to the achievement of various essential learning outcomes and programme objectives. Industry visits sensitize students to the practical challenges that organizations face in the business world. Industrial visits also give greater clarity about various management concepts for students as they can practically see how these concepts are put into action.

Department organized following visits to various industries in academic year 2014-15,

Sr. No.	Date	Name of Industry	No of students
1	13 Sep, 2014	Technical Visit to "the Big 5Construct India 2014 exhibition", Mumbai	30
2	25-26 Sep, 2014	Technical visit to Rashtriya Chemicals and fertilizers, Mumbai	80
3	Nov, 2014	Technical Site visit to MHADA Towar, Dadar, Mumbai	45
4	22 Feb, 2015	Technical Site visit to Bandra One World, Mumbai	40

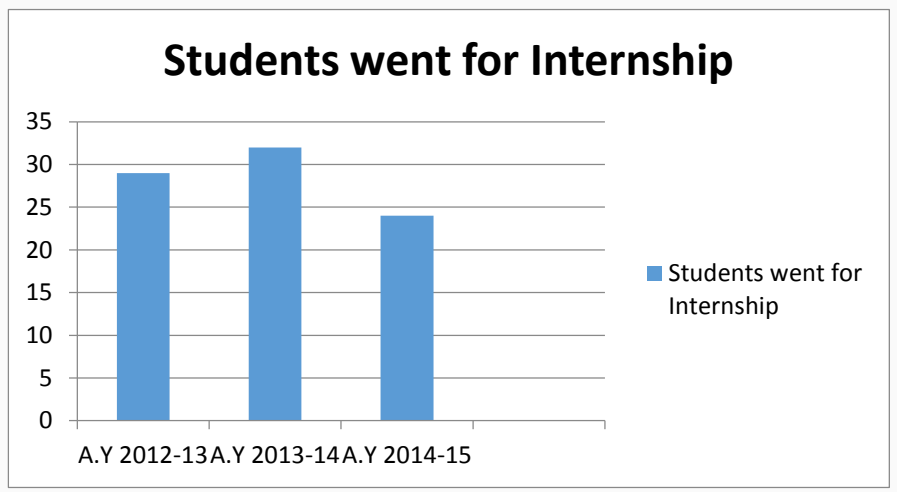
Technical Visit to RCF, Mumbai

Technical site Visit to RMC plant, Mumbai

8.4 Internship Training

An internship provides valuable experience. It helps students to gain a better exposure of field work. It also gives them valuable hands-on experience and allows them to apply what they've learned in college to a certain career field.

In academic year 2014-15, 24 students underwent to internship training to various industries. Some of the industries offered full paid training to students under certain circumstances, and they are, L & T constructions, Shapoorji, Gammon India, Kalptaru, & Raje consultants etc.



Civil Engineering Department has been selected in Best 15 Civil Engineering Departments in terms of Industry links, out of 2240 civil departments across India. (As per AICTE CII Survey-2015)

9.0 Research Projects under TEQIP

9.1 Research Projects done by Faculty

Sr. No.	Title	Principal Investigator	Amount
1	Conversion of Sullage to Non Potable water using potable device.	Dr. Hansa Jeswani	85,000 /-
2	Use of Iron-ore tailings as Construction Materials	Dr. Kshitija Nadgouda	90,000/-
3	Assessment of Pollution Strength & Flood Plain Zoning of Meethi River by using ArcGIS	Prof. Snehjit Kumbhar	74,000/-
4	Mapping Groundwater quality of Malad-East using GIS System	Prof. Pratibha Singh	10,000/-
	Total		2,59,000/-

9.1 Research Advisor

Prof. Dr. Tarun Kant

- Civil Engineering Department, IIT Bombay.
- Department has been appointed him as a senior research advisior to faculty .
- on 25 th July, he delivered one expert lecture titled " how to carry out Research at academic Institute".
- He has been helping department to create research environment & motivate junior faculty & students towards research projects.

10.0 Courses/Workshops/Trainings Conducted

Every year department organizes short term courses/Training/ workshops for faculty & students to gain extra knowledge & improve soft skills. Following are some of the Training Programmes/ courses organized by department in academic year 2014-15,

Training Programmes organized on "Traffic Safety & Awareness" on Feb, 2015

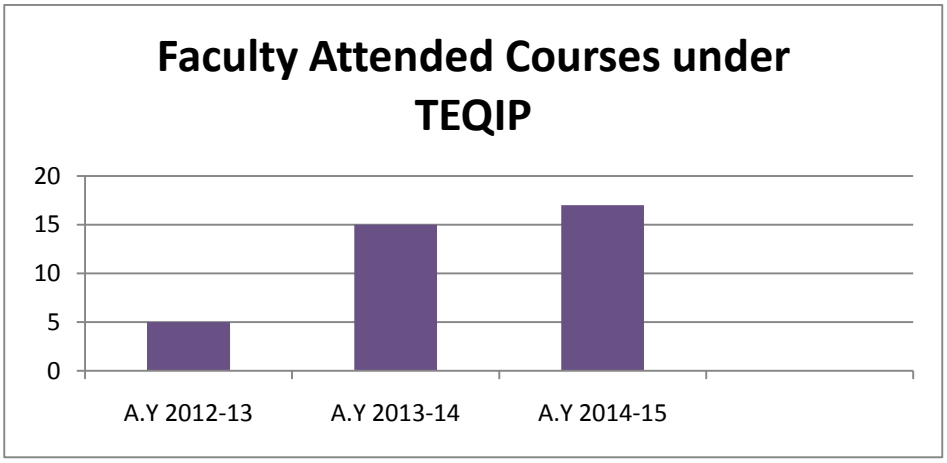
Live Demonstration on "New generation concrete floors using Somero laser screed & Dramix steel fibre"

Sr. No.	Types of Workshop/Training/Courses	Topic	Date
1	Training Programme	Traffic Safety Awareness	Feb,2015
2	Workshop	New generation concrete floors using Somero laser screed & Dramix steel fibre	April, 2015
3	Software Training	Introduction to ArcGIS	Sep, 2014.
4	Soft skills development	Introduction to the Primavera	Dec.2014/ March 2015
5	Soft skills development	Introduction to the MSP	Dec.2014/ March 2015

11.0 Courses/Workshops/Trainings Attended by Faculty

The World Bank assisted Technical Education Quality Improvement Programme (TEQIP) which was started in 2003 has given major focus of attention on faculty development and training to meet the overall project goal of upgraded teaching-learning process. The National Project Implementation Unit (NPIU) has conducted a study to assess the effectiveness of the programme and to scale-up for future. The study was conducted during October 2008-February 2009 with an objective to assess the gains in faculty development/training during TEQIP project, to identify the reasons for deficiencies noticed in meeting the desired objectives for faculty development, to identify best practices for faculty development/training in the project, and to recommend actions for scaling-up for faculty development/training and making the process more effective in future.

Initially the number of faculty members undergoing training was low. However subsequently the number had improved and in general, it was observed that 75-100 % faculty members had undergone one or the other training and by and large most of the faculty members have been covered under various training programmes with well known institutes like IITs,IIMs.



In every year, Civil Engineering Department, carry out a comprehensive and systematic Training Need Assessment (TNA) based on the needs of the faculty. And then department motivate faculty to take advantage of TEQIP Fund for attending conferences/workshops/trainings in various institutes in India as well as abroad.

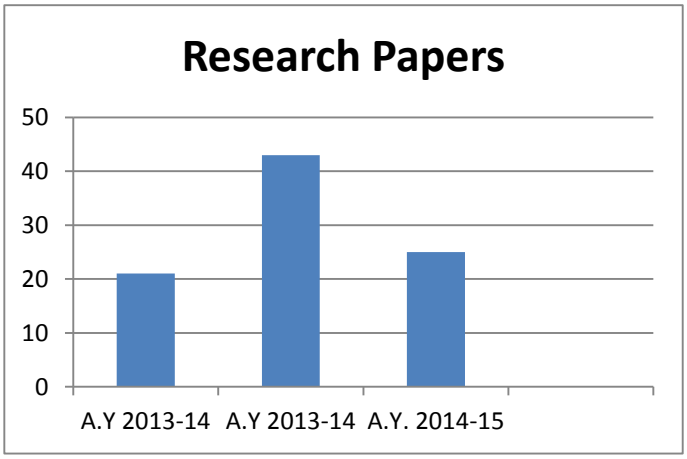
Following is the list of Courses attended by faculties in Academic Year 2014-15,

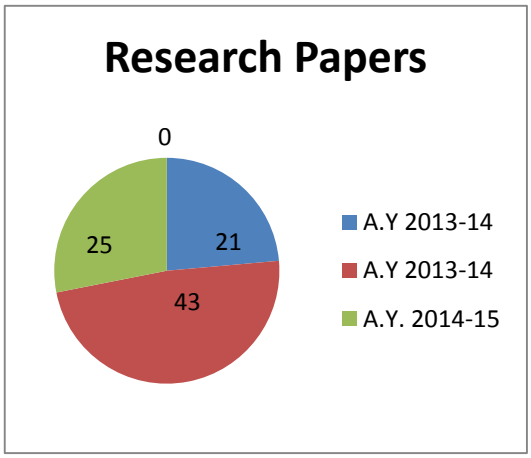
Name of the faculty	Course/ seminar/workshop Title	Arranged by	Duration
Dr.P.H.Sawant	Workshop on " Good governance, Leadership & Management"		**2-Day, 14-15 Oct, 2014**
	"International certificate programme in Training skills"	Rutgers University in association with Lavasa Pune	**4 DAY 18-21, Sep, 2014**
Dr. P.P.Nagrale	Workshop on " Outcome based Education & Accreditation for Faculty Members of technical institutions "	VJTI, Mumbai	**1 –day 7 Sep,2014**
	Training Programme on" Objectives & Outcomes based education system with special emphasis on feedback & Assessment of PEO'S & PO'S"	SPCE, Mumbai	**3 days 10-12 July 2014**
	STTP on "Interpersonal skills& Management"	SPCE	**5 day 30 June-4 july**
	"International certificate programme in Training skills"	Rutgers University in association with Lavasa Pune	**4 DAY 13-16 Sep, 2014**
Dr.A.R.Kambekar	Training Programme on" Objectives & Outcomes based education system with special emphasis on feedback & Assessment of PEO'S & PO'S"	EQUATE, New Delhi	**3-days 10-12 JULY,2014**
	Indian Technology Congress , 2014 on "Advanced Technology as Change agent to make India as Economical Super	Institution of Engineers	**2 –days 21-22 Aug, 2014**

	power"		
	Workshop on " Outcome based Education & Accreditation for Faculty Members of technical institutions "	VJTI, Mumbai	**1 –day 7 Sep,2014**
	Workshop on" Water Sector"	IIT, Bombay	**1 –day 12 Sep,2014**
	Workshop on "Internal Quality Assurance Mechanisms"	IIT, Chennai	**3-day 28-30 Oct,2014**
	Workshop on " Delivering High Performance Collaborative Researched & Funding Opportunities"	Banglore	**2 day 21-22 Aug,2014**
Dr.H.S.Jeswani	"International certificate programme in Training skills"	Rutgers University in association with Lavasa Pune	**4 DAY 13-16 Sep, 2014**
Prof. Kshitija N.	Workshop on " Outcome based Education & Accreditation for Faculty Members of technical institutions "	SPCE, Mumbai	**3 days 10-12 July 2014**
	International Conference on " Deep foundation technologies for Infrastructure Development in India"	IIT, Delhi	**2 days 19-20 Sep, 2014**
Prof. Smita. C.	Training on " Rigid Pavement: Design, Construction & Quality Control aspects"	Central Road Institute, New Delhi	**5-days 8-12 Sep, 2014.**
Prof. Pratibha Singh	**Training on "Geospatial Technology (GIS/GPS)" for roads & transportation.**	**Central Road Institute, New Delhi**	**4 Day 5-8, Jan 2015**

12.0 Faculty Research Publications

A significant number of papers based on the research work and project works have been published by the faculty members and the students in International Journals and in National Journals. Apart from these, they also present papers in International Conferences and in National Conferences under TEQIP fund.





Following is the list of Research papers published by faculty with students, industrial & Academic persons in academic year 2014-15.

Dr. P.H.Sawant P.H.Sawant, & A.H.Galve," Building integrated photovoltaic electricity generating potential" Journal of Energy Research & Environmental technology, Volume 2, number 4, April-June,2015.
Dr. P.P.Nagarale P.P.Nagrale, & A.B.Choudhari," Planning & Designing of economical water distribution network for R/Northward Mumbai city: a case study," Proceedings in National conference on role of Engineers in Nation Building (NCRENB),4-5 March2015.
Dr. A.R.Kambekar A.R.Kambekar & V.B.Chandanshive," Prediction of early stage construction cost of building using artificial neural network" National Conference on Advances in Civil and Structural Engineering, 22-23 August, 2014, Govt. College of Engineering Karad. A.R.Kambekar & V.B.Chandanshive, "Prediction of early stage construction cost of building projects using artificial neural network", 2nd International conference on Materials,Mechanics and Management, IMMM2014, College of Engineering, Trivandram, 17-19 Dec. 2014. A.R.Kambekar & Aditya Ahirwar (2015): "Cost Optimization Using Life Cycle Costing For Commercial Building" Proceedings of ASCE International Conference on Sustainable Energy and Built Environment, 12-13, March 2015 at VIT Vellore TN. Pp. 855-858 (Paper ID: MC023), ISBN No.978-81-923320-6-2. A. R. Kambekar & Sumit Padwal (2014) : "Life Cycle Cost Analysis of a Transit Camp Building in Mumbai" International Conference on Advances in Civil and Mechanical System (ACMES 2014) organised by Government College of Engineering Amravati during 23-24 December 2014. A. R. Kambekar & Pratibha Singh: "Assessing impact of sea level rise on Mumbai city using GIS" National conference on sustainable built environment, April 10-12, 2015, organised by Department of Architecture and Planning, IIT Roorkee, Uttarakhand. A. R. Kambekar & Pratibha Singh: "Effective planning for smart sustainable cities" National conference on sustainable built environment, April 10-12, 2015, organised by Department of Architecture and Planning, IIT

Roorkee, Uttarakhand.
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13.0 Consultancy Projects

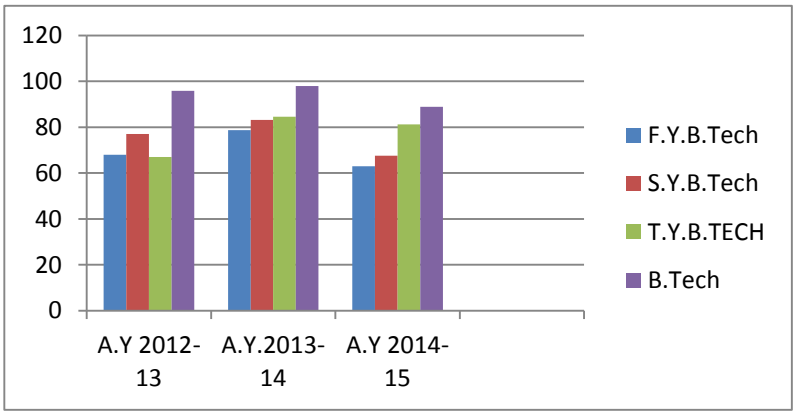
The Department has expertise in various research areas to provide knowledge and intellectual inputs which are of interest to the industry and other organizations

Sr. No.	Year	Sponsors	Title of Research Project	Coordinator
1	2013 start	PMGSY, New Delhi	Scrutinizing of DPR of the roads & bridge projects for for districts in Konkan	Dr. Prashant Nagrale Dr. A.R.Kambekar Dr. H.S.Jeswani, Prof. Kshitija N. Prof. P.S. Jagtap
2	2013 start	BMC, Mumbai	Peer Review for estimation of SWD works in Western Suburbs regarding reconstruction of nallas in Santacruz (W). (Amount in Grant- 7.62 Lakhs)	Dr. A.R.Kambekar Prof. Kshitija N.
3	2013	BMC, Mumbai	Peer Review for estimation of SWD works in Western Suburbs - Widening, Deepening & Training Of S.N. D. T. Nalla From Proposed S. W. Pumping Station To Juhu Road Culvert In H/West Ward-Phase II work. (Amount in Grant- 8.04 Lakhs	Dr. A.R.Kambekar Prof. Kshitija N.
4	2014	BMC, Mumbai	Peer Review for estimation of SWD work in Western Suburbs – Reconstruction of Mogara Nalla in R.C.C. Box Drain from Saakar Swapna Bldg. to Avadh Narayan Tiwari marg, Andheri (E) (Amount in Grant- 3.55 Lakhs)	Dr. A.R.Kambekar Prof. Kshitija N.
5	2014	BMC, Mumbai	Planning & Designing of Effluent treatment plant, Sewaage treatment plant & Rain Water Harvesting. (Amount in Grant-3 L) (Ongoing)	Dr. H.S.Jeswani
6	2014	BMC, Mumbai	Peer Review for estimation of SWD work in Western Suburbs –Training of Nalla from P.M.G.P. colony to ONGC colony at S.R. Mahadik Road, Jogeshwari (East). (Amount in Grant- 2.04 Lakhs)	Dr. A.R.Kambekar Prof. Kshitija N.

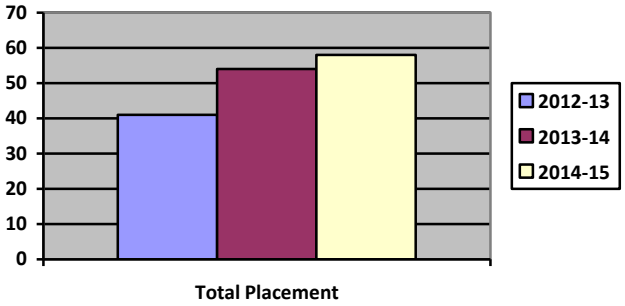
7	2014	BMC, Mumbai	Peer Review for estimation of SWD work in Western Suburbs – Improvement of Storm Water Drain along Marol Maroshi Marg up to Krishna Nagar Nalla, Andheri (East). (Amount in Grant- 2.30 Lakhs)	Dr. A.R.Kambekar Prof. Kshitija N.
8	2014	GALFAR E&C SAOG	Review and approval of training program and methodology for the National Graduates of Oman recruited by GALFAR E&C SAOG Company for Infini Programme management solutions Pune (Amount in Grant- 1.22 Lakhs)	Dr. A.R.Kambekar and Dr. H.S. Jeswani
9	2014	BMC, Mumbai	Peer Review for estimation of Fees for Peer Review for estimation of Training and Construction of Shivaji Nagar Nalla from Mangelawadi to S.N.D.T. in K/ West ward (Amount in Grant- 2.25 Lakhs)	Dr. A.R.Kambekar Prof. Kshitija N.

14.0 Trends & Statistics

14.1 Result Analysis of UG.



14.2 Campus Placement



Placement Statistics (Domain wise for B.Tech Civil)						
Academic Year	**Core**	**IT**	**Finance**	**Analysis**	**Others**	**Total Placed**
2014-15	36	19	-	02	01	58
2013-14	41	10	01	-	02	54
2012-13	33	06	02	-	-	41

15.0 Students Achievement

15.1 Higher Education Abroad (GRE)

Higher education is perceived as extremely important, and it is working as powerful tool to build knowledge based society for current century. As India's higher education system is the third largest in the world next to U.S. & China, the main governing body, University Grants Commission (UGC), enforces its standards and advises to central & state government institutes for different initiatives in this sector.

Civil Engineering Department carry out following activities to motivates students for higher education,

- Department creates a comprehensive syllabus for their undergraduate students which helps them to get easily entry in higher education sectors via GATE, GRE & CAT exams.
- Department regularly organize guest lectures, which creating awareness & importance of higher education in learning processes. Also invites some expertise from these sectors to enhance student's capability & developing extra skills/profiles which helps them to improve their performance.
- Department also provide special facilities like GATE Cell, a separate classroom with mini-library, opened for GATE Aspirants from daily 9.00 am to 9.00 pm.
- Department provide other facilities like Computer lab to students for accessing & exploring their study materials.

Till time so many students have taken advantage of above facilities provided by Civil Engineering Department and currently pursuing their higher education in various fields like M.S, M.Tech, M.B.A.

Sr. No.	Name of Student	Name of University	Areas
1	Mr. Rohan Raut	California University (UCSD), USA	Structural Engineering
2	Mr.Dhruv Hirani	Purdue University, USA	Construction Management
3	Mr. Nikhunj Khelurkar	Georgia Tech University, USA	Construction Management
4	Mr. Himanshu Wad	Georgia Tech University, USA	Transportation Engineering
5	Mr. Umang Parikh	Arizona University, USA	Construction Management
6	Mr. Krish V.	Georgia Tech University, USA	Construction Management
7	Ms. Kavita Krishnamurthy	Chalmers University, Sweden	Construction Management

15.2 Higher Education (India) GATE/CAT

Sr. No	Name of Student	Exam Qualified
1	Kartik Mahajan	GATE
2	Chaitanya Shastri	GATE
3	Rutuja Shinde	GATE
4	Rajesh Dhange	GATE
5	Aakash Kothari	CAT

15.3 Qualified for Government Sector

Sr. No	Name of Student	Post	Government Department
1	Mahesh Kanap	Jr. Engineer	BMC
2	Sohail Pathan	Jr. Engineer	BMC
3	Tushar Bhopale	Jr. Engineer	BMC

15.4 Other Achievements

Following students are published their research papers in various Journals & Conferences in academic year 2014-15

Sr. No	Name of the Student	Class	Paper Published in journal	Paper Published in Conference
1	A Baviskar	M.Tech (CM)	1	1
2	A. Bhoite	M.Tech (CM)	1	1
3	A. Chaudhari	M.Tech (CM)	1	1
4	N. Sutar	M.Tech (CM)	1	1
5	Ayush Bilala	B.Tech (Civil)	1	-
6	Himanshu Wad	B.Tech (Civil)	1	-
7	Abhilash Patil	B.Tech (Civil)	1	-
8	Sunay Shah & Nikunj Khelurkar	B.Tech (Civil)	1	-

Shubham Bhaisare, Ramdev Gohil, Swapnil Sankpal , Vivek Kapande, students of T.Y.B.Tech (Civil), secured 1 st rank in Aakar Competition at IIT,Bombay.

Bhoomi Shah, Chaitanya Shastri, Nitesh Sankpal, Prashant Tayde, are students of B.Tech (Civil) secured 1 st rank at Spectra Paper presentation at SPCE, Mumbai

16.0 Students Activities

CEA

The Civil Engineering Association (CEA) came into being almost 16 years back. However, few years later, CEA dwindled into oblivion due to a variety of reasons, lack of interest among students being one of them. CEA came back into limelight then in 2001 thanks to the enthusiasm of Nirmal Somani and his colleagues. Nirmal Somani was the first General Secretary of Nirmiti in 2001 which was conducted on a state level. Year by year, the popularity of Nirmiti grew by leaps and bounds and today it is one of the most sought after Technical Symposiums among Civil Engineering Colleges all over India.

Activities:

Presently Civil Engineering Association is involved into following activities,

Fresher's Quiz
CEA conducts a Quiz for all its Freshers every year. The Quiz is designed to develop interaction among the newcomers and the seniors and also to familiarize the freshers with their college and its culture.

Periodical Newsletter
Secondly, CEA publishes its periodical newsletter 'The Civil Express'. It includes articles not only by the students and by the professors but also by field professionals and ex-students.The motive behind this initiative is to inform the student fraternity of new developments in the field of civil engineering. It acts as a link between the professionals and the students besides providing a platform to the students to display their presentation and compiling skills. CEA is the only Student Body of Sardar Patel College of Engineering which has its own full-fledged newsletter.

SPECTRA

SPECTRA are the Annual National Level Technical Symposium of the CEA which is conducted for 2 days in the month of March. SPECTRA host a number of events, the biggest of them being the Technical Paper Presentation Contest.

17.0 Department Best Practices

(1) Dynamic Curriculum

- We have full freedom to change our syllabus as per industry requirement.
- Every year we are discussing curriculum of various subjects in department meeting. Also, we discus with Industry Expert.
- Incorporate proposed changes and put in subject board and academic board for approval.
- Once subject board and academic board approve the changes. The proposed syllabus will be implement from next academic year.

(2) Remedial Coaching

- During the semester we are conducting three examinations in addition to continuous assessment.
  - T – I Examination for 20 marks after five week of teaching.
  - T – II Examination for 20 marks after ten week of teaching and
  - End semester Examination of 100 marks after sixteen week of teaching.
  - If any student got less than 40 % marks in T- I Examination, we call him as academically weak student and conduct remedial coaching for them.

Similarly,

- If any student got less than 40 % marks in T- II Examination and End semester Examination, we are conducting remedial classes for them.

(3) Summer and winter training or Internship

- We have separate Training and Placement office which look after summer and winter internship and placement of the students in Campus.
- For summer and winter Internship the students has to apply to Training and Placement office Through HoD, Training and Placement officer will forward the application to the industry.
- Once the application of the student is accepted by the industry He or She can join internship training during summer or winter vacation.

(4)Mentorship

- **Structure of Mentorship**: Civil Engineering department introduces mentor report initiative for their undergraduate's students, which seek overall academic performance of the particular student. For proper materialize above idea, department formed 12 batches of 20 numbers of students in each. Also department allotted 9 numbers of faculties to above 12 batches as Mentor of that batch.
- **Objective of Mentor Report:** Students Mentor report reflects his overall academic performance. Also mentor can monitor student's progress & discuss the difficulties facing with their respective subjects. At the end of the year, Mentor will conclude the academic progress of a particular student and report it to the Head of The Department.
- **Format of Report**: Report contains total five points as listed below;

    a. *Details of Student*: In these point students personal information, address, technical activities & extracurricular activities has been recorded.
    b. *Academic Record:* In this point student's academic results per semester vise has been recorded.
    c. *Attendance Record*: In this point student's attendance, before Test 1, Test 2 & End Semester has been recorded to carry out his total attendance for respective semester.
    d. *Remedial Coaching*: According to his academic results any special coaching is required or not, that will be decided in this point.
    e. *Record of Meeting with mentor*: Its record of all personal discussions taken placed in whole semester along with date & Signature of students. At least 5-6 meetings are expected with every student in whole semester.